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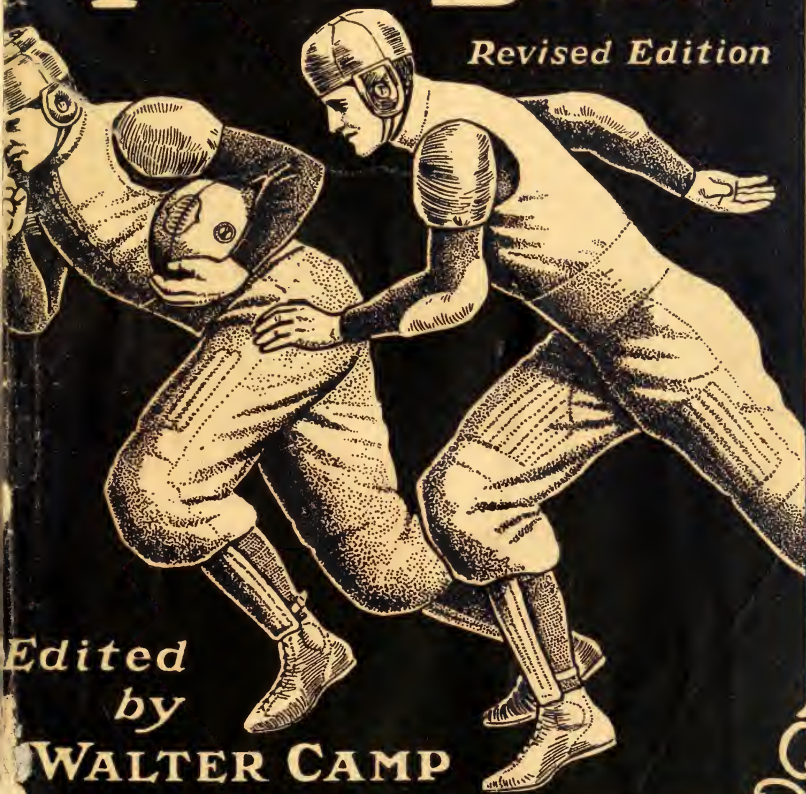
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SPALDING'S ATHLETIC LIBRARY

How to PLAY FOOT BALL

Revised Edition



*Edited
by*

WALTER CAMP

American Sports Publishing Co.
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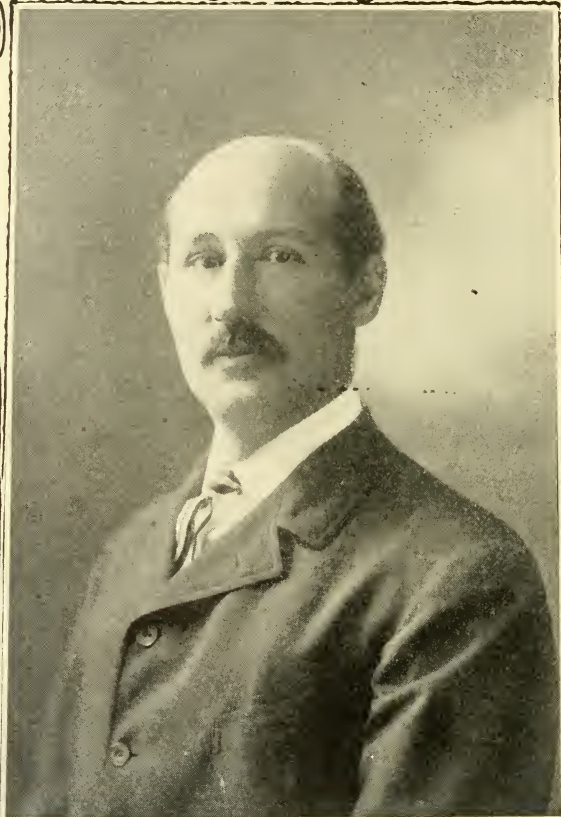
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See inside page of back cover for continuation of list



WALTER CAMP
YALE
MEMBER RULES COMMITTEE.

SPALDING'S ATHLETIC LIBRARY No. 183

How to Play Foot Ball

A PRIMER

ON THE MODERN COLLEGE GAME, WITH
TACTICS BROUGHT DOWN TO DATE

Edited by Walter Camp

NEW EDITION—REVISED FOR 1903

PUBLISHED BY THE
AMERICAN SPORTS PUBLISHING COMPANY

16 AND 18 PARK PLACE, NEW YORK

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GOAL

GOAL

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DIAGRAM OF FIELD.

A certain alteration in the foot ball rules for the season of 1903 provides that when the ball is put in play in the scrimmage at any point within the centre section of the field, that is, the portion bounded by the two twenty-five and the two side lines, that at least seven of the players of the side having the ball must be on the line of scrimmage and also that the player who first receives the ball, commonly known as the quarter-back, within the above mentioned territory, may carry it forward beyond the line of scrimmage, provided in so doing he crosses such line at least five yards from the point where the snapper-back put the ball in play. As it was feared that the referee, under whose province this run by the quarter-back is placed, would have some difficulty in telling at a glance whether the distance out from the centre was five yards, it was determined to suggest certain changes in marking. As the field is now marked off with white lines every five yards, parallel to the goal line, for measuring the five yards to be gained in three downs, under the new rules it is proposed that through the middle section of the field, that is, between the two twenty-five yard lines, additional white lines five yards apart, parallel to the side lines, should be marked in order to assist the referee in thus determining whether the quarter-back runs under the rules or not. Thus, while the foot ball field still remains a gridiron, the central section of it now resembles a checkerboard, and the appended diagram shows exactly how the field should be marked. As the field does not divide into five yard spaces evenly, it is wise to run the first line through the middle point of the field, and then mark off the five yards on each side from that middle line.

AN INTRODUCTORY CHAPTER FOR BEGINNERS

BY WALTER CAMP.

Those who are taking up the sport for the first time should observe certain rules which will enable them to become adept players with less mistakes than perhaps would otherwise fall to their lot.

A beginner in foot ball should do two things: He should read the rules, and he should, if possible, watch the practice. If the latter be impossible, he and his men must, after having read the rules, start in and, with eleven on a side, play according to their own interpretation of these rules. When differences of opinion arise as to the meaning of any rule, a letter addressed to the publishers of Spalding's Official Foot Ball Guide—the American Sports Publishing Company, 16 and 18 Park Place, New York—will always elicit a ready and satisfactory answer.

The first thing to be done in starting the practice is to provide the accessories of the game, which, in foot ball, are of the simplest kind. The field should be marked out with ordinary lime lines, enclosing a space of 330 feet long and 160 feet wide. While not absolutely necessary, it is customary to mark the field also with transverse lines every five yards, for the benefit of the referee in determining how far the ball is advanced at every down. The space between the two 25-yard lines should be also marked with lines running parallel to the side line and five yards apart, in order to aid the umpire in determining whether the quarter-back in making a run follows a certain rule which provides that he must cross the line of scrimmage five yards from the point where the ball was put in play. In the middle of the lines forming the ends of the field, the goal posts are erected, and should be eighteen feet six inches apart, with cross-bar ten feet from the ground. The posts should project several feet above the cross-bar. The ball used is an oval leather cover containing a rubber inner, which

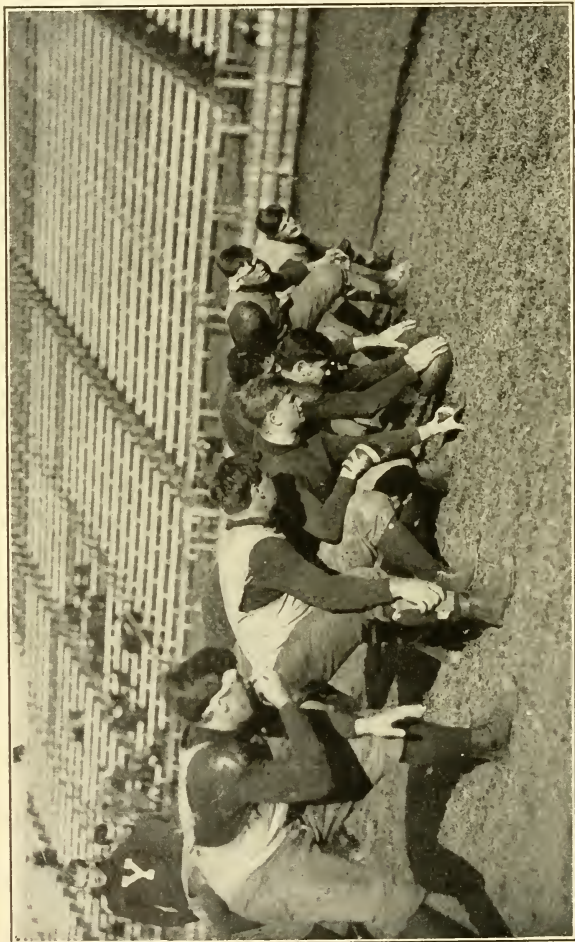
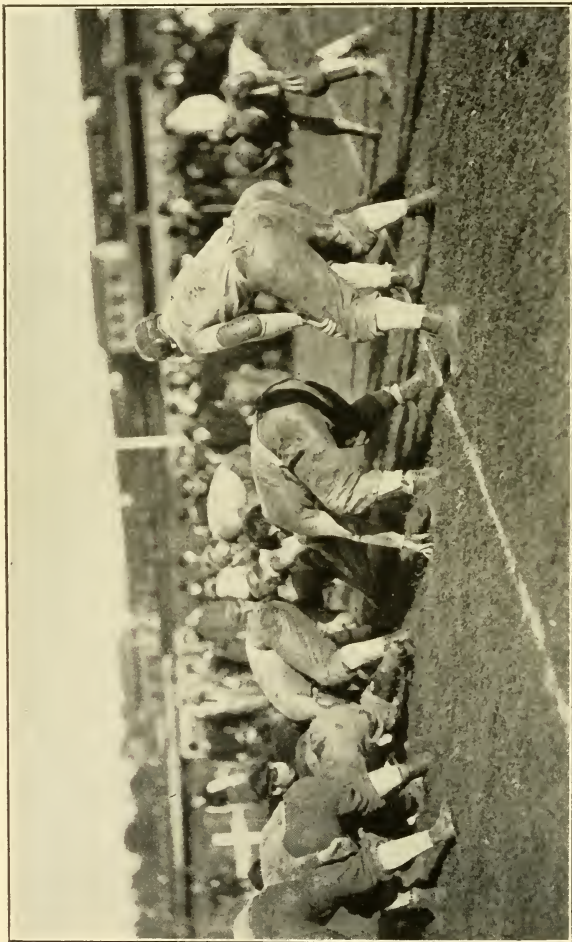


Photo by Hemment

No. 1—THE YALE RUSH LINE GOING THROUGH SIGNALS PREVIOUS TO LINE-UP

is inflated by means of a small air pump or the lungs. The ball used by the principal teams is the Intercollegiate Match, No. J5, adopted by the Intercollegiate Association, and made by A. G. Spalding & Bros. The costumes of the players form another very important feature and should be of a proper and serviceable nature. An innovation in uniforms was introduced a few years ago by Harvard in the shape of leather suits. Although they were expensive, and while not on that account liable to be generally adopted, they were particularly light and good for a rainy day. Canvas makes most serviceable jackets for the players, as do also jerseys reinforced with leather. These can be home-made or purchased at a small expense from any athletic outfitter. The canvas jacket should fit closely, but not too tightly, and lace up in front, so that it may be drawn quite snugly. Some have elastic pieces set in at the sides, back of arms, but these additions are by no means necessary. Jerseys, with leather patches on elbows and shoulders, are also worn. The trousers should be of some stout material, fustian for example, and well padded. This padding can be done by any seamstress, quilting in soft material over knees and thighs, or the regular athletic outfitters furnish trousers provided with the padding. Long woolen stockings are worn, and not infrequently shin guards, by men playing in the forward line. The most important feature of the entire uniform is the shoe. This may be the ordinary canvas and leather base ball shoe with leather cross-pieces nailed across the sole to prevent slipping. Such is the most inexpensive form, but the best shoes are made entirely of leather, of moderately stout material, fitting the foot firmly, yet comfortably, lacing well up on the ankles, and the soles provided with a small leather spike, which can be renewed when worn down. Inside this shoe, and either attached to the bottom of it or not, as preferred, a thin leather anklet laces tightly over the foot, and is an almost sure preventive of sprained ankles. Head gears are made to protect the runner and must not be composed of sole leather, papier mache, or any other hard, unyielding substance that might injure another player. A soft leather, with pneumatic tube



No. 2—THE BACKS' FORMATION FOR A RUN AROUND THE END BY WEEKES (COLUMBIA)

Photo by Hemment.

around the top, is one of the best of these head protectors. (A complete list of a foot ball player's requirements will be found in a subsequent chapter in this book.)

Underneath the canvas jacket any woolen underwear may be put on, most players wearing knit jerseys. As mentioned above, there are several players who can, to advantage, go without the regulation canvas jacket and wear a jersey in its place. These are especially the quarter-back, the centre-rush or snap-back. Of recent years backs and linemen tend more than ever to the adoption of the leather-reinforced jersey.

The team of eleven men is usually divided into seven rushers or forwards, who stand in a line facing their seven opponents; a quarter-back, who stands just behind this line; two half-backs, a few yards behind the quarter-back; and finally, a full-back or goal tend, who stands at kicking distance behind the half-backs. This gives the general formation, but is, of course, dependent upon the plays to be executed.

Before commencing practice, a man should be chosen to act as referee, umpire and linesman, for in practice games it is hardly necessary to have more than one official. The two sides then toss up, and the one winning the toss has choice of goal or kick-off. If there be a wind, the winner will naturally and wisely take the goal from which that wind is blowing and allow his opponent to have the ball. If there be no advantage in the goals he may choose the kick-off, and his opponents in that case take whichever goal they like. The two teams then line up; the holders of the ball placing it upon the exact centre of the field, and the opponents being obliged to stand back in their own territory at least ten yards, until the ball has been touched with the foot. Some man of the side having the kick-off must then kick the ball at least ten yards into the opponents' territory. Preferably, therefore, he will send it across the goal line or else as far as he can, and still have his forwards reach the spot in season to prevent too great headway being acquired by the opponents' interference, but he will not kick it across the side line. The opponents then catch it and return it by a kick, or they run with it. If one of

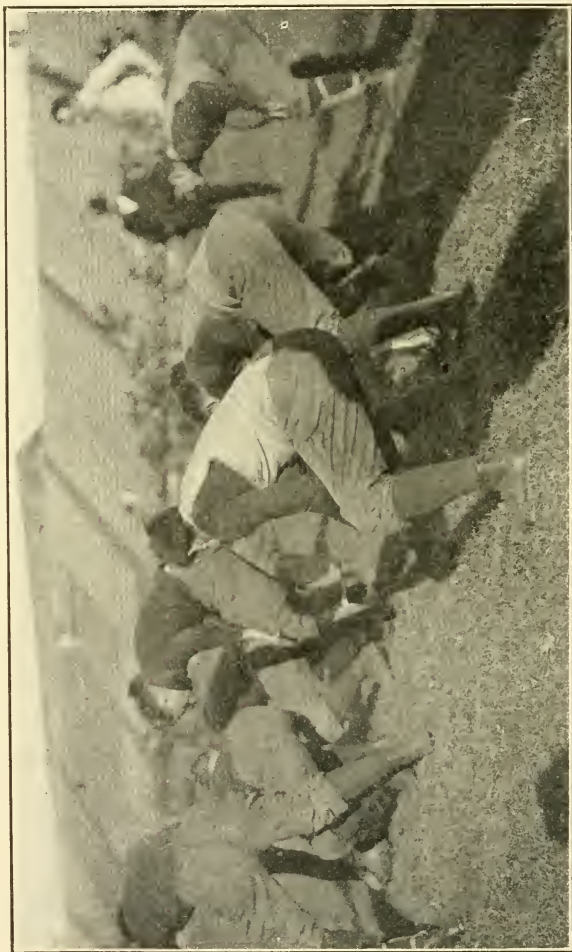


Photo by Hemment

No. 24—ANOTHER FORMATION OF TACKLE-BACK

them runs with it he may be tackled by the opponents. As soon as the ball is fairly held; that is, both player and ball brought to a standstill, the referee blows his whistle and the runner has the ball "down," and someone upon his side, usually the man called the snap-back or centre-rush, must place the ball on the ground at that spot for a "scrimmage," as it is termed. The ball is then put in play again (while the men of each team keep on their own side of the ball, under the penalty of a foul for off-side play) by the snap-back's kicking the ball or snapping it back, either with his foot, or more commonly with his hand, to a player of his own side just behind him, who is called the quarter-back. The ball is in play, and both sides may press forward as soon as the ball is put in motion by the snap-back. Naturally, however, as the quarter-back usually passes it still further behind him to a half-back, or back, to kick or run with, it is the opposing side which is most anxious to push forward, while the side having the ball endeavor by all lawful means to retard that advance until their runner or kicker has had time to execute his play. It is this antagonism of desire on the part of both sides that has given rise to the special legislation regarding the use of the hands, body and arms of the contestants—and beginners must carefully note the distinction. As soon as the snap-back has sent the ball behind him, he has really placed all the men in his own line off-side; that is, between the ball and the opponents' goal, and they, therefore, can theoretically, occupy only the position in which they stand, while the opponents have the legal right to run past them as quickly as possible. For this reason, and bearing in mind that the men "on side" have the best claim to right of way, it has been enacted that the side having possession of the ball may not use their hands or arms, but only their bodies, when thus off-side, to obstruct or interrupt their adversaries, while the side running through in the endeavor to stop the runner, or secure possession of the ball, may use their hands and arms to make passage for themselves.

The game thus progresses in a series of downs, followed by runs or kicks, as the case may be, the only limitation being that

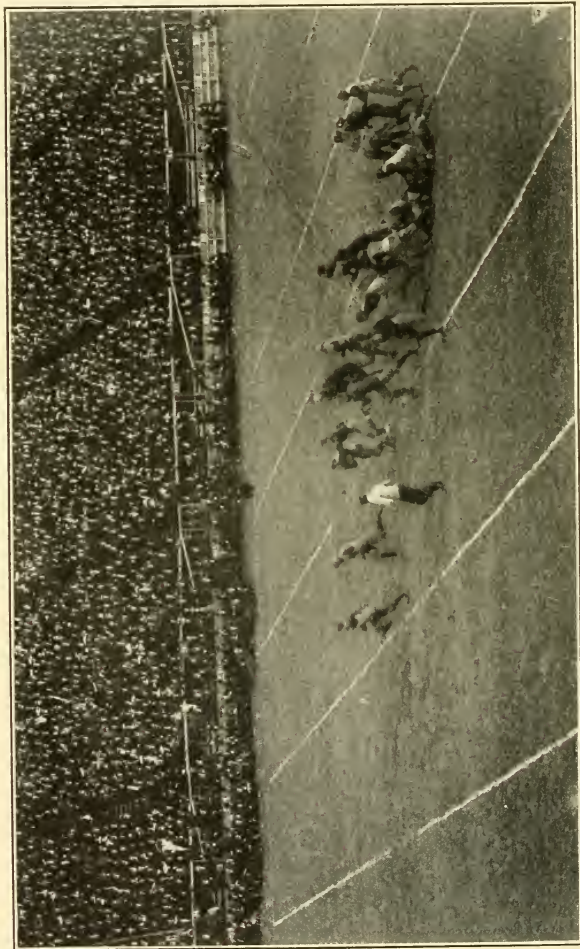


Photo by Burton

No. 23—ANOTHER TACKLE BACK RESULTING IN AN OPEN PLAY. METCALF STARTING ON HIS 65-YARDS RUN FOR YALE'S SECOND TOUCHDOWN IN HARVARD GAME, 1902

of a rule designed to prevent one side continually keeping possession of the ball without any material advance or retreat, which would be manifestly unfair to the opponents. This rule provides that in three "downs" or attempts to advance the ball, a side not having made five yards toward the opponents' goal or retreated twenty yards toward their own goal, must surrender possession of the ball. A still further provision makes it contrary to rule that the team should retain possession by a second retreat of twenty yards unless the ball has meantime gone into the possession of the opponents. As a matter of fact, it is seldom that a team actually surrenders the ball in this way, because, after two attempts, if the prospects of completing the five-yard gain appear small, it is so manifestly politic to kick the ball as far as possible down the field, that such a method is more likely to be adopted than to make a last attempt by a run and give the enemy possession almost on the spot. In such an exigency, if a kick be made, the rules provide that it must be such a kick as to give the opponents fair and equal chance to gain possession of the ball and must go beyond the line of scrimmage unless stopped by an opponent. There is one other element entering into this progress of the game, and that is the fair catch. This can be made from a kick by the opponents, provided the catcher takes the ball on the fly, and, no other of his own side touching it, plants his heel in the ground at the spot where the catch is made. This entitles him to a free kick; that is, his opponents cannot come within ten yards of his mark, made by heeling the catch, while he (and his side) may retire such distance toward his own goal as he sees fit, and then make a punt or a drop, or give the ball to some one of his own side to place the ball for a place kick. Here again, as at kick-off, when taking the free kick, he must make an actual kick of at least ten yards, unless the ball is stopped by the opponents. His own men must be behind the ball when he kicks it, or be adjudged off-side.

Whenever the ball goes across the side boundary line of the field, it is said to go "into touch," or out of bounds, and it must be at once brought back to the point where it crossed the line,

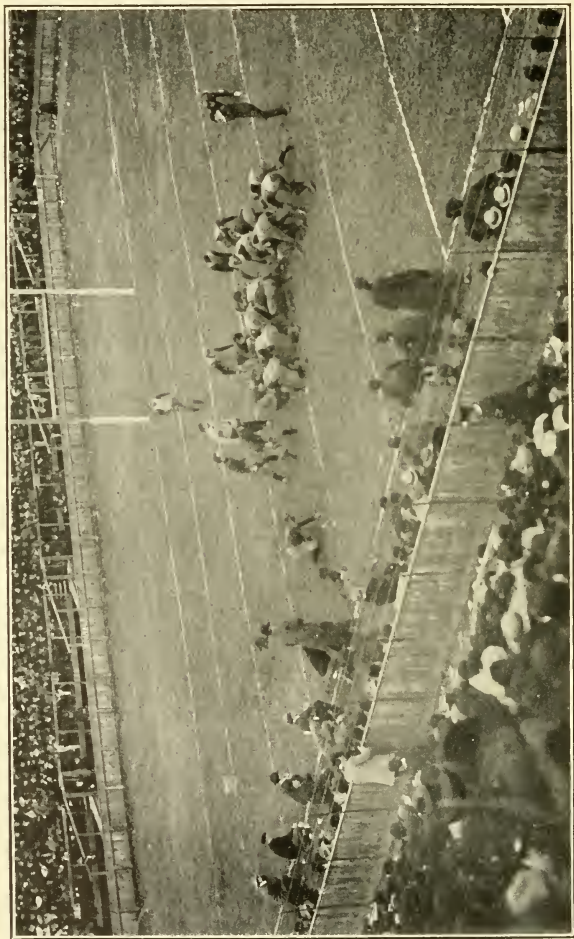


Photo by Burton
No. 3—HARVARD'S BACK FORMATION, WHICH, FOR A TIME, WAS SUCCESSFUL.

and then put in play by some member of the side which carried it out, or first secured possession of it after it went out. The methods of putting it in play are as follows: To touch it in at right angles to the touch-line, and then kick it at least 10 yards, or most commonly, walk into the field and make an ordinary scrimmage of it, the same as after a down. In this latter case, the player who intends walking in with it must, before stepping into the field, declare how many paces he will walk in, in order that the opponents may know where the ball will be put in play. He must walk in at least five and not more than fifteen yards. We will suppose that the ball by a succession of these plays, runs, kicks, downs, fair catches, etc., has advanced toward one or the other of the goals, until it is within kicking distance of the goal posts. The question will now arise in the mind of the captain of the attacking side as to whether his best plan of operations will be to try a drop kick at the goal, or to continue the running attempts, in the hope of carrying the ball across the goal line, for this latter play will count his side a touchdown, and entitle them to a try-at-goal. On the other hand, upon any first down when inside the twenty-five-yard line, if he try a drop-kick and fail to score, the ball can be brought out, not for a twenty-five-yard line kick-out, but only a ten-yard one; that is, his side can line up at ten yards, so that the defenders of the goal are actually forced to kick out from almost within their own goal. In deciding, therefore, whether to try a drop-kick or continue the running attempts, he should reflect upon this and also upon the value of the scores. The touchdown itself will count 5 points, even if he afterward fail to convert it into a goal, by sending the ball over the bar and between the posts, while, if he succeed in converting it, the touchdown and goal together count 6 points. A drop kick, if successful, counts 5 points, but is, of course, even if attempted, by no means sure of resulting successfully. He must, therefore, carefully consider all the issues at this point, and it is the handling of those problems that shows his quality as a captain. If he elects to continue his running attempts, and eventually carries the ball across the line, he secures a touch-



Photo by Hemment
No. 4—QUICK OPENING THROUGH GUARD FOR A MASS PLAY—PRINCETON

down at the spot where the ball is finally held, after being carried over, and any player of his side may then bring it out, and when he reaches a suitable distance, place the ball for one of his side to kick, the opponents, meantime, standing behind their goal line. In placing the ball it is held in the hands of the placer, close to, but not touching the ground, and then carefully aimed until the direction is proper. Then, at a signal from the kicker that it is right, it is placed upon the ground, still steadied by the hand or finger of the placer, and instantly kicked by the place kicker. The reason for this keeping it off the ground until the last instant is that the opponents can charge forward as soon as the ball touches the ground, and hence would surely stop the kick if much time intervened. If the ball goes over the goal, it scores as above indicated, and the opponents then take it to the middle of the field for kick-off again, the same as at the commencement of the match. The opponents have the privilege either of taking the kick-off themselves or of having the side which scored kick-off. The ball is also taken to the centre of the field if the goal be missed after a touchdown, although formerly the opponents could then bring it out only to the twenty-five-yard line.

There is one other issue to be considered at this point, and that is, if the ball be in possession of the defenders of the goal, or if it fall into their hands when thus close to their own goal. Of course, they will naturally endeavor, by running or kicking, to, if possible, free themselves from the unpleasant situation that menaces them. Sometimes, however, this becomes impossible, and there is a provision in the rules which gives them an opportunity of relief, at a sacrifice, it is true, but scoring less against them than if their opponents should regain possession of the ball and make a touchdown or a goal. A player may at any time kick, pass or carry the ball across his own goal line, and there touch it down for safety. This, while it scores two points for his opponents, gives his side the privilege of bringing the ball out to the twenty-five-yard line, except as noted above, and then taking a kick-out, performed like kick-off or any other free kick, but it can be a drop-kick, a place-kick or a punt.

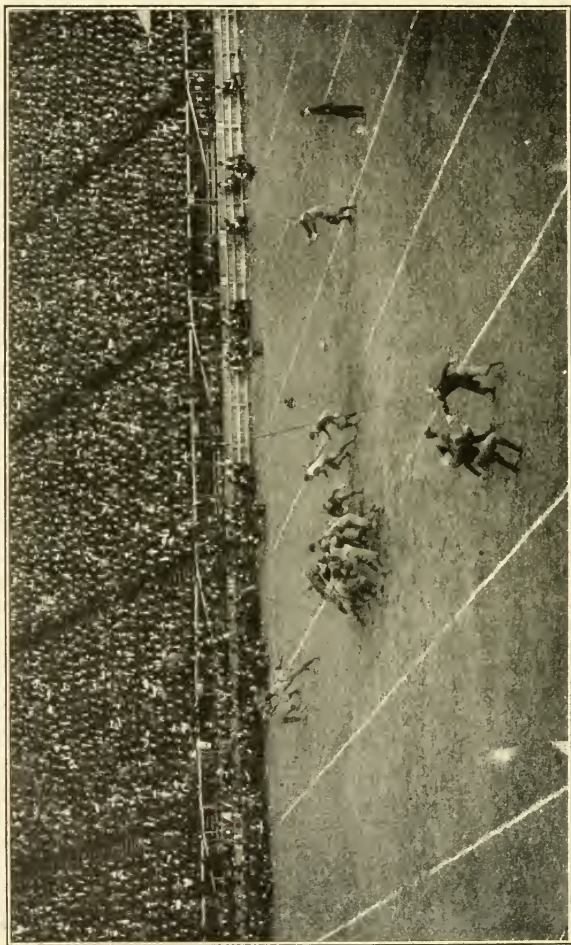


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No. 5—PASSING BALL FOR A PUNT

The succession of plays continues for thirty-five minutes in a regular match. Then intervenes a ten-minute intermission, after which the side which did not have the kick-off at the commencement of the match has possession of the ball for the kick-off for a second thirty-five minutes. The result of the match is determined by the number of points scored during the two halves, a goal from a touchdown yielding 6 points, one from the field—that is, without the aid of a touchdown—5 points; a touchdown from which no goal is kicked giving 5 points, and a safety counting 2 points for the opponents. In practice it is usual to have the two periods of play considerably shorter than thirty-five minutes, generally not over twenty or thirty.



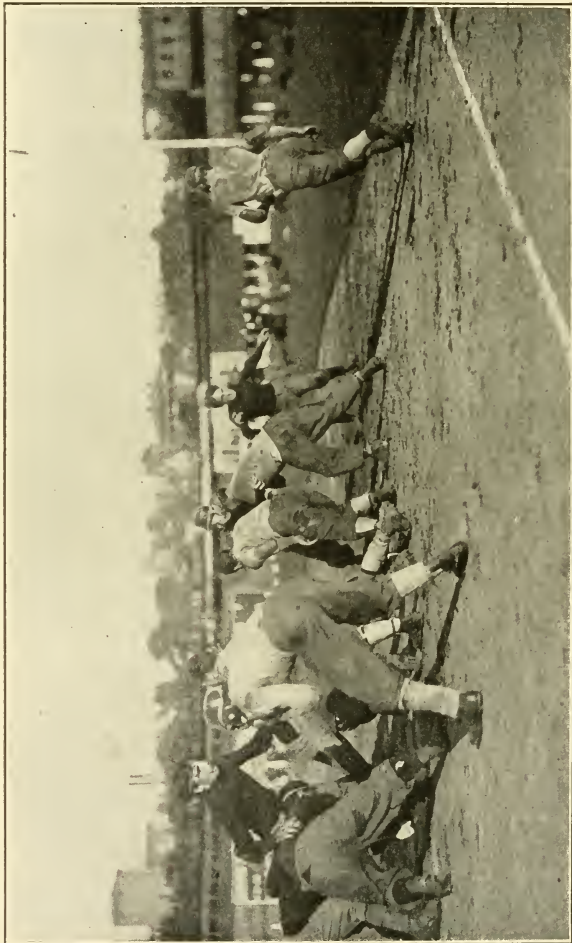
Photo by Hemment

No. 6—RAFFERTY (PRINCETON) BLOCKING AN END FROM RUNNING DOWN THE FIELD

HOW TO PLAY FOOT BALL

BY WALTER CAMP.

I wish to preface the brief remarks which I take occasion to make in this chapter regarding special plays in foot ball with the statement that they are not intended to cover the first principles of the individual positions in the game. In another book I have dwelt upon these at length, and have there defined with as great accuracy as I could the principal duties assignable to the occupant of each position on the team. In addition to this, I have there given the main features of team play. It is worth while to mention this at the outset, because a team can make no greater mistake than by taking up what are known as "trick" plays, or, in fact, any of the ordinary team plays in the present modern game, before the individuals of that team have become thoroughly perfected in the practical rudiments of the game, and perform almost by instinct the ordinary duties of their positions. A team which undertakes to make strategic plays before mastering these primary points will always find itself working at a tremendous disadvantage, and the waste of power will be almost incalculable. Perhaps I could not put it more plainly than to say that the tendency is altogether too much toward what is known as "git thar" principles in all of our lines of sport to-day. A crew endeavors to row in a shell before learning the principles of the stroke; our boxers are apt to go in for the swinging, knock-out blow at the sacrifice of the more old-fashioned, but better form, sparring; but in none of these forms is it more evident than in the one under discussion, namely, foot ball. It is not at all uncommon to see a team playing intricate criss-crosses, double passes and concealed ball plays, whose men are still tackling high, and whose half-backs kick a punt from low down on the toe. To every reader of this book then, I say with the heartiest good will, master the rudiments first if



No. 7—CAPTAIN WEEKES (COLUMBIA) GOING ROUND END FOR A LONG RUN
Photo by Hemment

you wish to make yourself valuable to any team; master them thoroughly if you wish to see your team win when it comes to important matches. These special plays which follow are plays which captains and coaches can work out to an almost infinite number of variations, but it will be the individual players on the team who will, in the end, determine whether the use of these plays will turn out successfully.

Under the present rules, whenever a free kick is attempted, it must be an actual kick of not less than ten yards into the opponent's territory. For this reason all the flying wedge opening plays of some years ago, as well as formed wedges from fair catches and kick-outs have disappeared. The captain now has to perform the principal part of his strategic play, outside of the kick, from ordinary downs, instead of from what have been called "free kicks," but what have been really "free wedges." Furthermore, the changes in rules for 1903 make one of the prime essentials of a good team proficiency in running from regular formations.

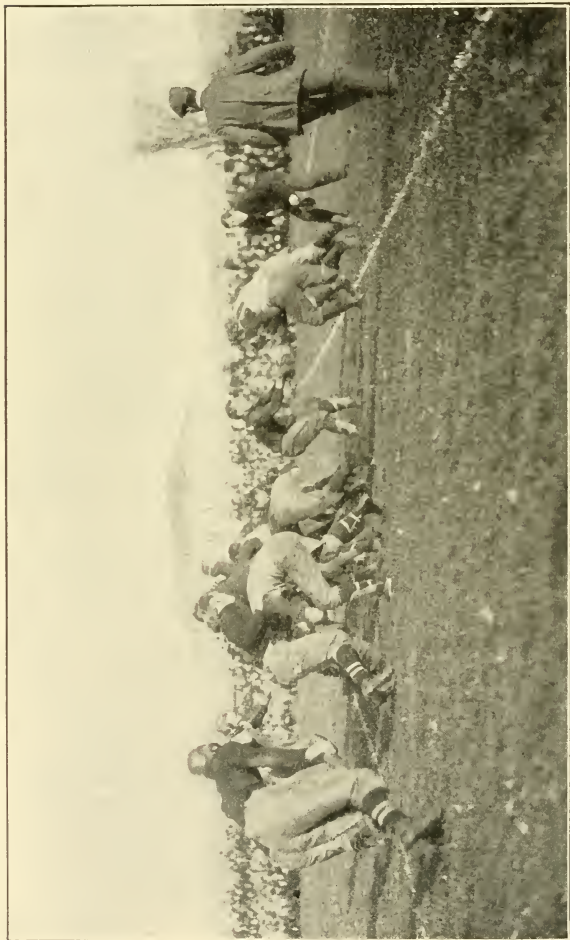
I, therefore, begin with running in the line. By this I mean running by any one of the seven men forming the forward line in the team. Some years ago there was a great deal of guard running, and in a good many books published recently on the game, the guard is spoken of as by all odds the most available man in the line for running with the ball. That is true to this extent. The guard occupies a good position for short and, perhaps, unexpected runs, but with the modern game the guard is such a feature in the defensive work that it has become a good deal of a question whether he ought to be given much running to do on his own account, and especially from his position in the line. If he be taken back into what is known as the tackle back formation he does the same work, but with a far greater conservation of energy. But if the reader will bear this in mind, and so not make use of his guard except to such an extent as shall still preserve the guard for his ordinary work, one can say that he has in these guards two available men in the line. The most natural run for the tackle



Photo by Burton

No. 8—A GOOD, CLEAN TACKLE

is between the tackle and guard on the other side of the line from which the tackle stands. In the performance of this run, the principal feature is to disguise the fact that the tackle is about to start, and his getting a quick and free start, not followed, or followed at a considerable distance only by his vis-a-vis. In order to do this he must form the habit of holding himself in the same position when he is not going to make this run that he occupies when he is going to undertake it, for any difference will indicate to his opponent what the play is to be. But, breaking away, he runs closely behind the quarterback, taking the ball on the fly as he passes, and making a short and sharp dash in between his own guard and tackle who, with the assistance of the half and full-back, one usually preceding and the other following, break through with him, his own quarter-back and end protecting him from behind, also closing in upon him as he goes through. A tackle can also be run in a similar fashion between the tackle and end, guard and center, or even entirely around the end, but this latter play is of no great value except with particularly fast tackles. Gill and Cowan were both able to perform it, but it is rather an exception, and more than that, it uses up the tackle's wind a good deal more than when he goes through the line, because the interference is likely to stand out pretty well toward the edge of the field, and the tackle will run his full distance and not be able to get through the end after all, thus having taken a considerable dash and under high speed and with no good result, but merely the loss of a down. In defining the tackle's running, I have also defined the running of the guard where he goes around behind the quarter in a similar fashion. But there is one other style of running for the guard which is perhaps more common, and that is to drop him back, and after allowing him to interfere for the running half once or twice to disguise the play, allowing him to run himself, going between, perhaps, the center and guard or even the guard and tackle. Such plays will still be used by placing a back up in the line and taking the heavier guard back, These plays are strong where the guard is a big man and a hard

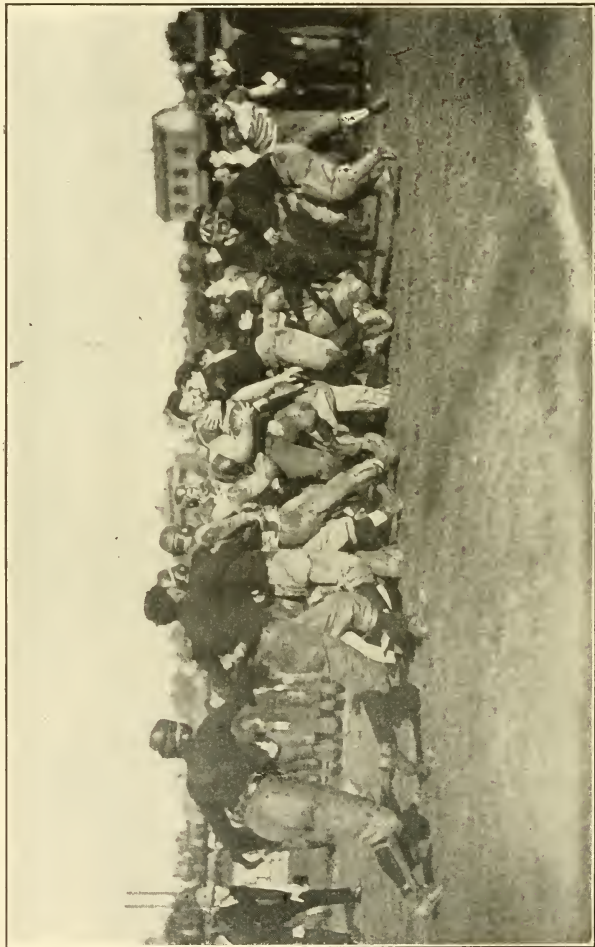


No. 9—CHADWICK (VALE) STARTING ON A RUN ROUND WEST POINT'S LEFT END

Photo by Burton

runner with good legs. A fat man is useless in such a case. The University of Pennsylvania performed some very excellent work in dropping guards-back as interferers, and also in giving the guards themselves the ball occasionally. The ends may be used exactly as the guards or tackles in running, or they may be dropped back of the line into practically the half-back positions, and transferring positions and alternating with the half-back taking the ball. One of the most effective plays ever worked was that in which the end-rusher was dropped back of the line and sent in between the tackle and guard repeatedly, on his own side, the ball being passed to him quite a little distance from the quarter. Then suddenly the same play was made, and the ball was passed directly over the head of this end-rusher to the half-back, who had crept out beyond, and who thus took the ball in a free field and made a free, long run. This was repeated again in the same game, showing that the play itself was good even to be used more than once. The above plays are also assisted by special formation, the players taking positions on signal.

All the line men can be used for short dashes into the line on their own side in the same way as that described for the guard and the end, but these plays are exceedingly difficult against an expert team. Occasionally the half-back can be used to dash through the line, but it is the exception when a line man is quick enough for the play. Other runs which are possible by the line men are, of course, cris-crosses and double passes. One instance of these cris-crosses will illustrate sufficiently to enable a captain or coach to carry out a great variety of them, using every man in his line if he wishes. Let us take, for instance, the tackle and half-back cris-cross. As in the instance I described of the ordinary tackle run, the tackle—say the left tackle—suddenly shakes himself free from his opponent and dashes straight at the quarter, a few feet behind him, of course; the quarter passes him the ball as he reaches him, exactly as though the left tackle were then going around between the right tackle and the guard. But instead of doing this, the left tackle passes to the right half, who runs to the left end, the half, full-back and quarter all interfering for him. The great point in this play is to see that the opposing



No. 10-BROWN, LEFT TACKLE (COLUMBIA), BEING PUSHED BY THE BACKS' FORMATION
BETWEEN GUARD AND TACKLE FOR A GOOD GAIN
Photo by Hemment

right tackle does not get the runner as he starts off to get the ball, and furthermore, that this right tackle and right end are blocked late but long. Such a criss-cross can also be worked with the end, and with the guard it can also be tried to turn either inside or outside of the end. So much for the line men running.

Next we come to the half-backs and full-backs. Every one is familiar with the following plays, which we only mention in order to call them to the attention of the captain who is studying out in the early part of the season what plays he shall make the most of. The half-back running on his own side between any of the various men in the line; the half-back running between any of the men on the side away from his own side; the full-back running on the right side or the left side through the same openings and under the same circumstances and with practically the same interference, for in the modern game the captain is wise who uses his three men behind the line in such a way that any one of them may perform any of the various plays devised for the backs, and then maintain a similar formation, no matter what the play is to be. More than once has a team in one of the biggest championship matches of the year betrayed its own plays by the movement of the men just previous to the snapping of the ball, and one cannot too strongly deprecate the exact detailing of certain movements in certain plays to get through or block or to take care of particular individuals when that move leads to the betrayal of the play before it has actually come off. The cardinal points to be remembered regarding running by the half-backs and full-backs are these: That the interference must depend upon the speed of the men engaged, and that no interference should be such as to slow up the runner appreciably, unless it be for some trick play or double pass where the slowing up of the runner means merely his being caught after getting rid of the ball. I have seen many a good team spoiled by their attempting to follow out a set rule as to the order in which interferers should reach the end. For instance, in the days of Heffelfinger, he showed how a guard could readily go from his own position out to the opposite end, and before the runner, and interfere most nobly for him all the way down the field. For this reason

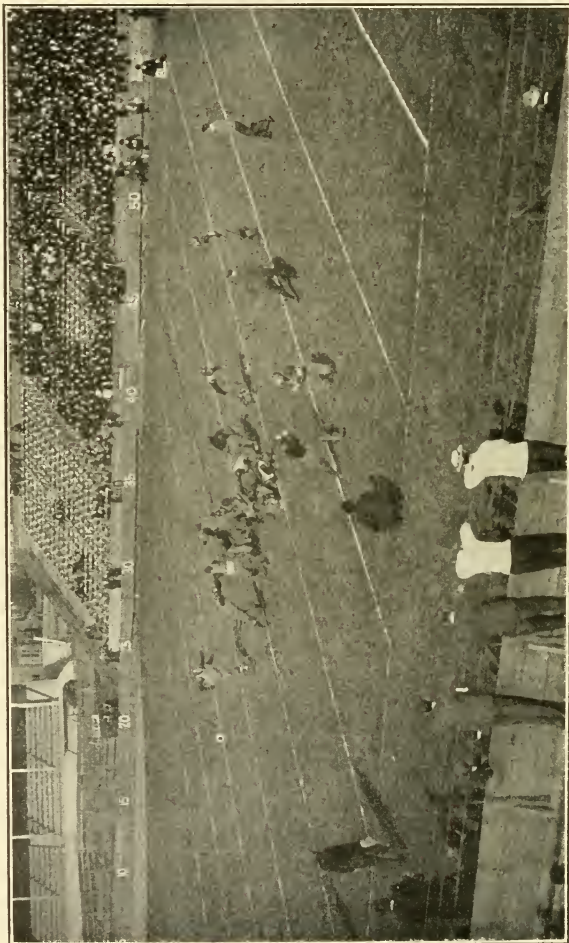


Photo by Hemment

No. 11—ONE OF DEWITT'S FAMOUS PUNTS FOR 50 YARDS

every guard was at once coached to go out and interfere on the end. Three out of five were too big and slow to accomplish this to any advantage, but that did not seem to make any difference. Somebody had written that the guard should interfere on the end, and the result was that everybody had to wait until the guard got out there. Meantime, the runner was usually caught from behind. A good guard, who can pick up his feet lively, and who can get around quickly and easily after blocking, can get out before an ordinary fast runner. So, too, can the opposite end. Some teams use the tackle here, but this is a mistake, because the tackle should slow up the opposing tackle and should also make the play safe from behind. A team ought not to have a quarter-back who is too slow to get out to the end as an interferer before the back with the ball reaches the other point. But for all that there are quarter-backs, and good ones, too, who are a little slow in this and hold back the runner. These men should either be coached into better speed or taught a little different way of getting rid of the ball on the run, perhaps, or be sent to perform the tackle's duties, and let the tackle get there if the tackle is a remarkably fast man; otherwise such a transfer would only make bad worse. From what I have already said the captain can see that he must measure his interference by the speed of his interferers, and match them with the speed of his runner with the ball in order to satisfactorily solve the equation for his own team. It is the captain of brains who wins by doing just these things, while the captain without them takes the hard and fast rule that has been laid down by some one, perhaps of his own team, who has written an article from the knowledge of only one or two teams, and thinks that all can be brought up to exactly the same point in the same way.

Regarding going through the line close to the center by backs, (and by backs I mean the half-backs as well) there are two ways of helping a man through the line. One is to batter a hole before him and let him slip through, and the other is to put him up against the line and then push him so hard that the line has to yield and let him through. There are line plays which combine a variety of these tactics, but there are some principles to be

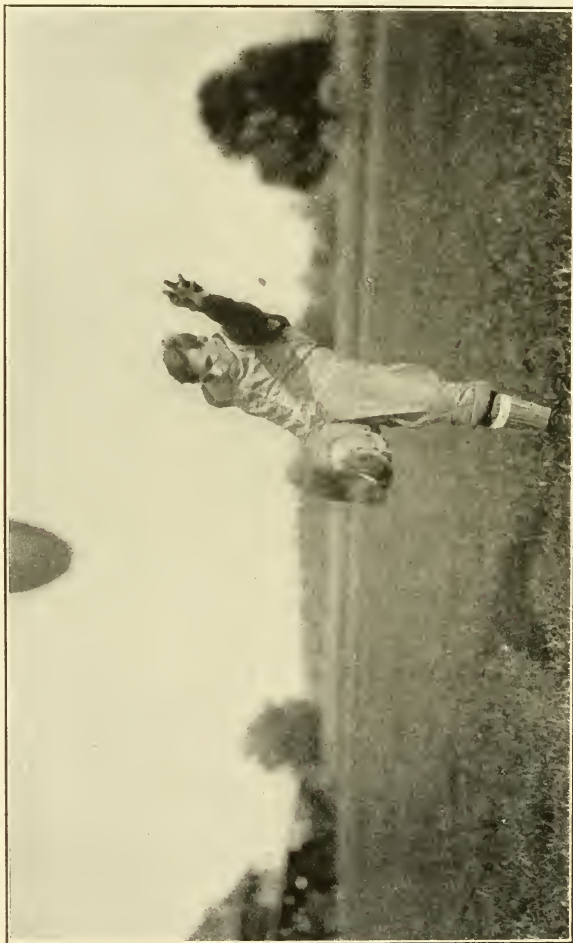


Photo by Hemment
No. 12—DEWITT (PRINCETON), THE WONDERFUL LONG DISTANCE PUNTER, TOEING A HIGH ONE

remembered in connection with them which will give them something more than a careless "hit or miss" move. In the first place, a big, heavy man should never be run into the line with one or two light interferers preceding him, whereas a light man can be run in behind two heavy men with abandon. The reason for this is that there are times when the hole will be choked up in spite of the attempt of the interferers, and a heavy man getting his head down may strike one of the interferers in the back and incapacitate him for further work. It is not so apt to hurt the runner as it is the man whom he strikes, although there have been cases of injury to the runner. When the hole is choked up, and heavy men are interfering, they can usually keep the mass moving away from the runner, even if they do not open the hole for him, and this play is much less hard and far less dangerous. In sending two light interferers ahead to spring an opening for the runner, it should be borne in mind that an opening made in this way is a quick, sharp one, and should not be called upon to rely for its efficacy upon steady pushing. An opening, on the other hand, made by two heavy men in this fashion can be much smaller and rely largely upon the accumulated force even after the runner strikes the line. The men who go ahead to interfere must always remember if they have to go down to fall away from the opening and not block it up. The men who run behind the runner should always remember that it is their duty not only to protect him from behind and push and crowd him when he begins to slow up, but never, under any circumstances, to interfere with his legs. Foolish men going behind a runner will oftentimes step on his heels and throw him when the runner left to himself could have made his distance. *The ends are particularly serviceable in this pushing work, and there are very few ends at the present day who do not understand their half-backs and backs so well that they can go up with them into line and give them courage and assistance by pushing after they have struck the line.

To come now to the wedges or mass plays. Owing to the prejudice of the public and the feeling that wedge work was taking too much of the attention of the players, captains and coaches, the rule-makers attempted to eliminate a great deal of this work

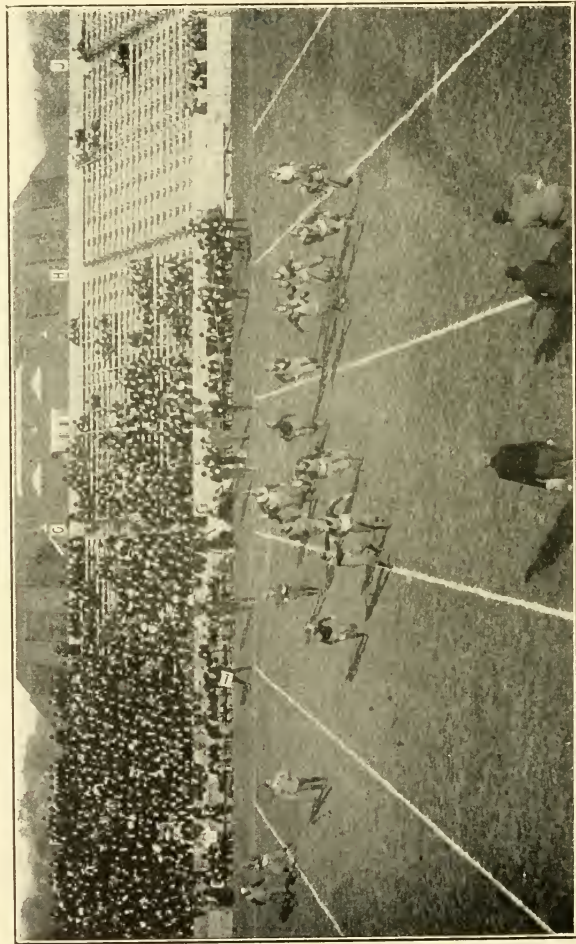


Photo by Hemment
No. 13—CORNELL'S BACKS GOING AROUND PRINCETON'S RIGHT END

by the passage of a rule against momentum-mass plays as well as the passage of a rule insisting upon actual kicks. This latter rule I have mentioned earlier in this book. There is no question but that this has done away with a great deal of the most showy part of the flying wedge, but rules against momentum-mass playing have not and are not likely to eliminate the use of the principle of wedges. They took off the weight which it was possible to get into these wedges, and in that way were an excellent thing, but it would take more severe legislation to eliminate all mass plays. The rules of 1903, however, go farther, and while not yet tested, certainly offer encouragement to more open playing. The mass play of years ago was not particularly dangerous in the big games, and, in fact, it was found that a good deal of the trouble came from school teams and teams where it was possible for one boy on the team to be considerably larger and older than his companions, and who was used as a peak of the flying wedge to the imminent risk of the limbs of his smaller opponents. But the fear that even in the big games the flying wedges would come to be used to exhaust some one good player on the other side, rather than for their proper purpose of gaining ground, became so strong that the legislation was demanded. Wedges, therefore, became wedges from downs, and of all of these the most successful will always be those in which two or three men are started well back of the line, and these men are afterwards joined, after the ball is actually put in play, by two or three others, and this entire mass then crowds through the line at the point.

The revolving wedge is likely to be used to some extent. In this some lineman drops backs, under the new rules, exchanging positions with a back. When the signal is given the ball is snapped, the quarter hands it to the full-back or the half-back, either will do, according to agreement, and the entire mass of men push forward directly on the guard. Having pushed for a moment until they feel the impetus checked they then turn their entire force in the direction of the guard on the other side, thus making it as nearly as possible at right angles

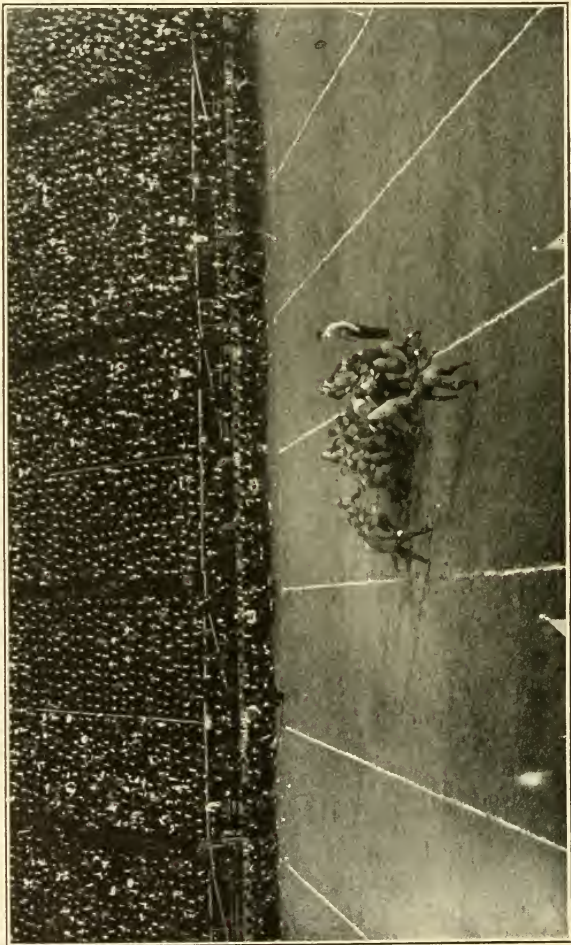
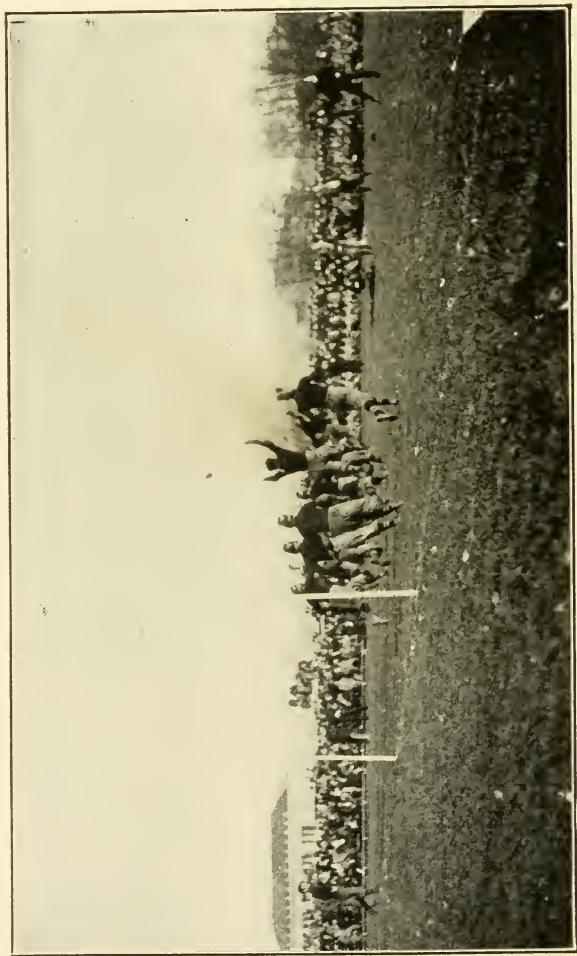


Photo by Burton

No. 14—BUCKING HARVARD'S LINE

to their former pushing, and keeping up a steady pressure there. And it will be found that the opponents, in attempting to resist the first onslaught, have directed their force straight down the field, and will not get back to this revolving mass, so that it is quite possible to crowd the runner by them some yards. Wedges at the end of the line, that is, the formation of wedges before the ball has been snapped, have not proven successful as yet, although there is no doubt but that there is a good principle involved, and if every team could be properly trained to perform them, it is possible that they might be efficacious, but they are altogether too complicated and as yet have not been fortunate enough to secure the brand of success. For this reason it is hardly advisable even for the best of teams to undertake, at the expense of their other plays, this so far unsuccessful manoeuvre. In forming wedges the captain should always bear in mind that it is the legs of the wedge which count even more than the weight, and for this reason it is practice which makes the wedges successful and not the extra pounds in the team. A good, clever, pushing team made up of only average men in weight, could push a big, heavy team around almost at will, simply by the strength and precision of their work, attained only through long and careful practice. For this reason the captain should select such wedges as he decides are the most advantageous for his team early in the season, and then stick to those wedges and practice them unfailingly day after day until every man is perfect in his part and knows how to do that most valuable of all things in this work, namely push.

To come to the last point of this brief summary of plays, namely, kicking. This department under the rules of 1903 becomes still more important. The special points about kicking will be the accurate placing of the ball and the acquirement of long-distance punting as well as place kicking. Kicking into touch, where admissible under the rules, should be made much more of, and it is becoming absolutely necessary for a team to have good punters and quick, sharp kickers in order to take advantage of certain modifications in the laws of the game. To go into the details of



ATTEMPTS OF DEFENDING SIDE TO BLOCK KICK AT GOAL FROM TOUCHDOWN (VALE-
PRINCETON GAME)

Photo by Burton.

these kicks would be an almost infinite task, but the captain can study out the situation from the following premises: A kick is absolutely necessary at kick-off, kick-out and every fair catch. What kind of a kick then will be most advantageous to his team? A short one, high, where his man can get under it, or a long distance one giving the opponents a chance, perhaps, of return, but enabling him, if he has fast ends, to hold the ball down at the distance of the kick?

Kicking has thus come to be an absolute essential in a well-rounded team, and the style of that kicking adapted to the make-up of the individual components of that team in end rushers, tackles and backs.

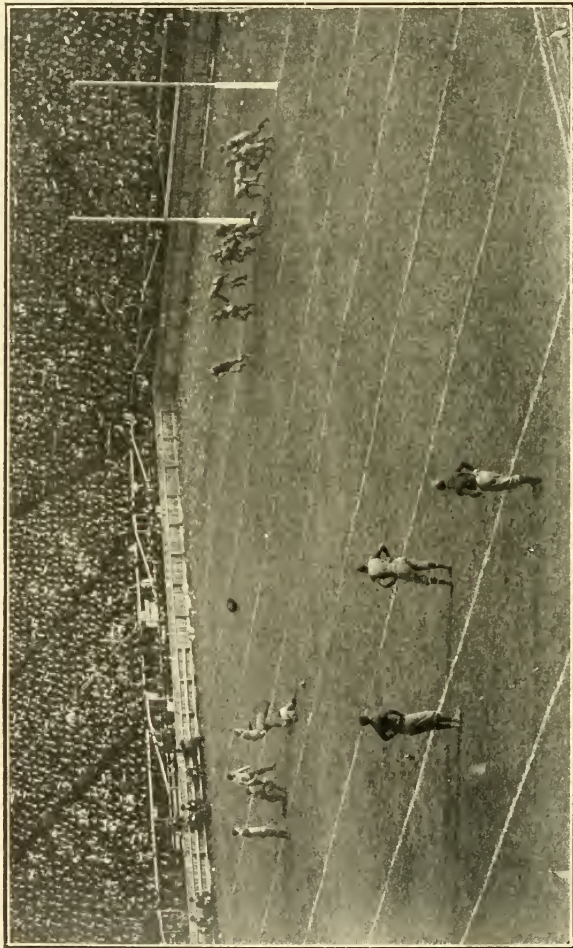


Photo by Burton
KICKING A GOAL. (BOWMAN KICKING FIRST GOAL IN YALE-HARVARD GAME OF 1902)

TACKLE BACK FORMATIONS

MODERN PLAY

BY WALTER CAMP.

The work of the team may be generally divided into that of the line and backs. In this division the work of the backs includes all the work done behind the line of scrimmage whether a line man is drawn back there or not. Bearing in mind this general division, a coach should so sub-divide the work as to insure the proper development of these two bodies and in order to effect this he can put as much individual coaching on the members of the team as he can secure.

It has come to be a pretty generally accepted axiom of foot ball that a good line is a prime essential to success. Not that a team with a good line and poor backs can win, but that no matter how good the backs are, if the team is handicapped by a poor line, that team is pretty sure to lose. This, while true in a measure, has been magnified by many coaches to such an extent that there is a feeling of hopelessness and helplessness when a line is not made up of star players. This is all wrong, for stars are by no means essential to a good line. A certain amount of weight is, however, a necessity. A team with a light centre trio can never hope to cope with heavy opponents. A single individual in the centre, flanked by two big guards, may at times be carried, if he is muscular, aggressive and experienced. But, as a rule, it is wise to start out with plenty of weight in these positions and spend the time in teaching the men how to play them than to waste time on men who, while giving considerable early promise for the position on account of greater activity, are really too light to fill the place. Our illustration, No. 1, on page 6, shows a heavy line in position to go through signals. It will be noticed that the very attitude of the men shows power and solidity. In fact, this line exhibited in its later work in the season all the qualities which go to make up a first-class aggregation of forwards.



Photo by Hemment
CATCHING IN THE HANDS (BURKE, PRINCETON QUARTERBACK, CATCHING A PUNT FOR A RUN)

The ordinary game of foot ball with the general division of plays and the characteristic features of the game, is now too well understood to need any special description. There has grown up in the last few years, thanks to the crystallization of the rules whereby coaches and players knew that they should not have to give up their perfected forms of attack because those who had not developed the game so far felt that the game was becoming more one of weight than science, a greater organization and development of the forms of assault which have been equally well met by a further perfection of defence.

The main features of a foot ball contest may be divided into individual and team play. The individual work blends into that of team play, but there are certain points that may be classed as distinctly individual. Kicking, for instance, is an individual acquirement, although it requires the perfection of the rush line and a good pass to make it effective. With the development of the modern game, kicking has in a fair manner kept pace through the development of special individual kickers, from time to time, like Bull of Yale, Brooke of Pennsylvania, Hirshberg of Chicago, O'Dea of Wisconsin, Haughton of Harvard and DeWitt of Princeton; the last, indeed, a very remarkable man.

While kicking is the main point of individual work and has been fairly developed, we know that it has by no means reached its limit, not that we expect men to kick further than DeWitt, or make a drop kick goal from a greater distance, but that the theory of safe punting as developed by the Englishmen is still beyond our ordinary kickers, and it is along this line that we ought to develop more. There are many times when a punter on an American college team would be far more effective if he were sufficiently accurate to place the ball, as are some exceptional Englishmen, either high or low and land it just across the side line, so as to prevent a run back. We are developing spirals and fancy kicking, but we need more of the strategic kicking.

Other points of individual work are, of course, the snapping of the ball back in the scrimmage by the centre, tackling in the open by single players, interference by a single man, protect-

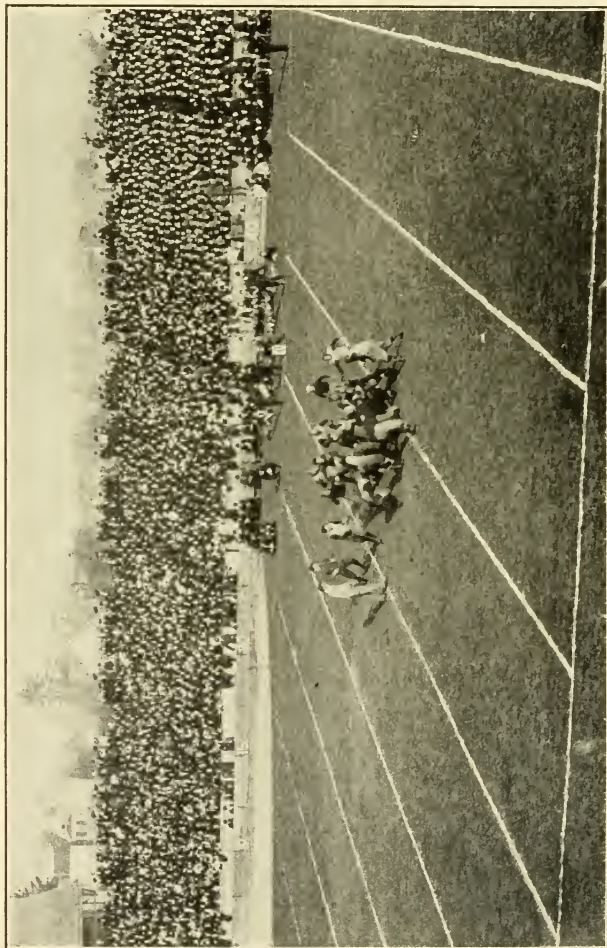


Photo by Burton
BLOCKING AN ATTEMPT TO GO AROUND OUTSIDE TACKLE (PRINCETON-YALE GAME, 1902)

ing the kicker and catching the punt and the general work of the individual positions. None of these offered any special advancement in the last season or two, but in team play the progress has been very marked. The most important developments have been along the line of assault, as already stated. Some seasons ago the mass on tackle or wedge on tackle was the highest perfected system of team attack. Tandem plays were used with this, and "guards-back" was familiar to all players. But, of late, variety has come in more strongly. Formations are no longer exceedingly simple for the opponents to understand, and while there is a similar combination of weight and power used to reach a weak spot in the opponents' line, the methods are far more studiously planned and more perfectly carried out.

The principal plays with which the modern captain and coach should be familiar are those involving close connection between line and backs and by that means tandem formations and their principal push plays through the line, line bucking, end runs, both close and wide with formations for same, protection of kickers, methods of tackling, blocking and especially boxing an end or tackle. Finally, in individual play—and this should be a matter of special individual coaching—kicking of all kinds, especially punting.

With these points in mind we have had illustrations made showing the performance of these various plays by the best teams in the country and these are shown on pages 6 to 48, with a few words of explanation accompanying each.

During the last few years the rules determining the actual play of foot ball have been allowed, as stated, to crystallize to such an extent that strategic play has been rendered far more possible, coaches and teams being in a position to know just what they could plan for and thus work up plays one season which they further developed in succeeding seasons. Under these methods has come the introduction of what are technically known as "formation plays." That is, plays in which one man is dropped back of the line and, together with the three backs and quarter-back, completes a group which acts as an attacking machine and can be directed at the will of the quarter against any

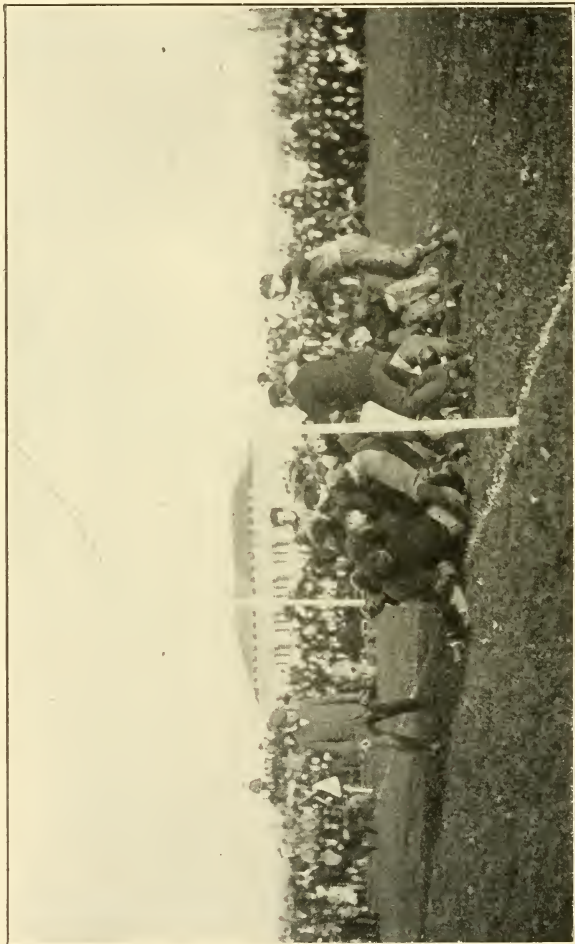
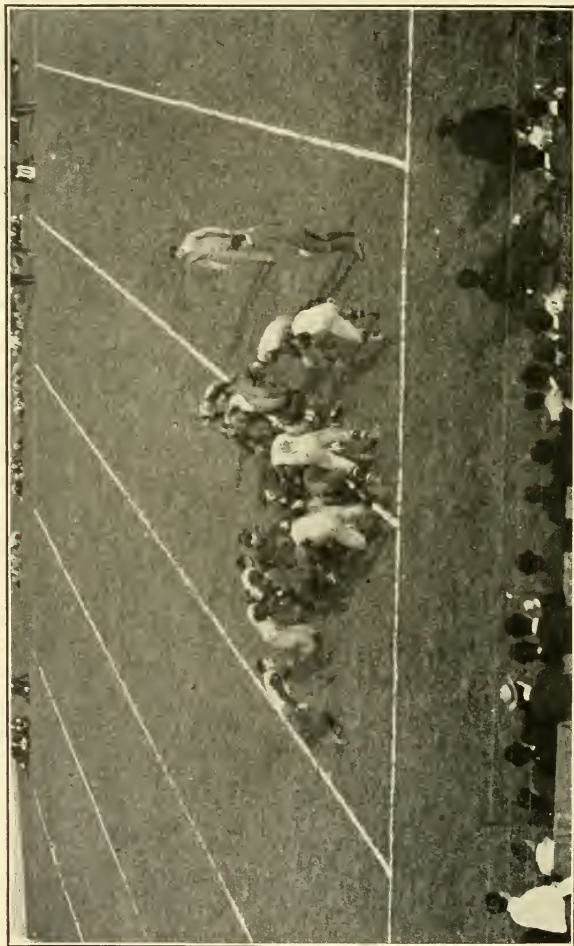


Photo by Burton

MAKING A TOUCHDOWN

part of the opposing line. This places at the command of the quarter-back an engine of assault with which he may attack any portion of the opposing line from tackle to tackle or out of which, when in motion, he may swing a single player around the ends and thus deceive the opponents by sending the interference at one point while the man with the ball, or the real attack, goes to another. The development of this line of play has been phenomenal. This in a certain way, too, may be similar to earlier mass plays, guards-back for instance, where two heavy men were taken back from the line and the mass was sent against the opponents, but by far the most effective form of these modern plays has been that in which the concentration of weight at a certain point was only a very small proportion of the real value of the work. Generically, these plays have been christened "tackle-back formation," because the teams using them most continually and first were those at New Haven, where the tackle was taken back as the extra man in the formation. The Yale team of 1900 first brought these out and used them with telling effect, not only mowing down the lines of the opponents, but getting the runner outside of the tackle and for marked gains time and again in their big contests of that year. Harvard played a similar style of game the following year with equally good results, although their plays leaned rather more to the tandem style of play.

In 1902 the Yale team still further developed these plays, adding two others by means of which they succeeded in their two important contests, namely, with Harvard and Princeton, in making no less than three touchdowns out of a total of six, by runs of more than half the length of the field, the actual place of the runners' emergence being cleverly disguised by the tackle-back formation. These plays were run off more rapidly than ever before, owing to the greater facility of the men in their execution and the speed of Rockwell, the Yale quarter. In the Middle West, Michigan with Weeks, a quarter-back equally fast and clever in his manipulation of plays, also produced some phenomenal results. Possibilities of the blending of open and closed running, the development of strategic work even without an extra man behind the line, promise to go on still further, and it is



THE TACKLEBACK PLAY, WHICH HAS PLAYED HAVOC WITH SO MANY RUSH LINES, (TAKEN
AT YALE-PRINCETON GAME OF 1902)
Photo by Burton

now the duty of the coach and captain to thoroughly master not only the work of individual position, but also the science of team strategy and formation play. Changes must be made in the relative positions of these men under the new rules, but having once developed the principle it is hard to believe that it will not be made of use, even though the men may be obliged to start from different positions. In the old days of three men back of the line there was room for strategic handling of a limited number of plays, but with this more recent development the possibilities have been tremendously increased and the rewards, therefore, of the coach or captain, who makes a study of them, are correspondingly great.

Immediately after the season of 1900, when the Yale team introduced the tackle-back, there was a dissemination of this theory throughout the teams of the country, greater probably than that of any other play that has ever been perfected. For this reason the season of 1901 showed almost every team of prominence using the tackle-back and this development lost none of its attractiveness during the season of 1902, but with so many teams adopting the general principle, there was still plenty of dissimilarity in the way they made use of their men and the results attained. Some of them merely took the tackle back and made him an extra interfeerer without sufficiently combining him with the group of men behind the line. Others, while successfully combining his work with that of the half-backs and backs, made use of this machine attack in quite a different way from that shown in its original conception. Wherever and however it was used, as a rule, it proved effective during the season of 1901. There were certain teams, however, who failed to develop under it, more because they stuck to old methods than because the play could not be adapted to their men. Such teams, as a rule, were the ones who used this extra man purely and simply as another interfeerer and did not get a satisfactory grouping.

Our readers probably need not be convinced of the effectiveness of this weapon of attack and we, therefore, present it to them, giving in our illustration, No. 2, on page 8, a picture of the simplest method of tackle-back formation, as it shows how

the plays can be worked up. The exact placing of the men in this formation must always depend upon their relative speed, for the play must move with a fair measure of rapidity and must under no circumstances be slowed up after once in motion until it meets the resistance of the opposing line. It will be noticed that the largest man in our illustration stands nearest the quarter, and this is the method of the majority of the teams. In this case he is presumably the tackle. Behind him is one of the backs and by his side, at greater or lesser distances, according to the plan of the play, are the other two backs. The ball may be given to any one of the four and the attack may be made at any point in the line. It is only necessary for a coach to study this illustration to see its possibilities and he can then work out for himself an almost infinite variety of plays with this as a basis or starting point. Under the new rules, in this, as in the other variations, if this play be in the middle section of the field, his line man or one of his backs will probably have to start from the line.

Illustration No. 3 on page 14, shows very accurately Harvard's tandem formation behind the line which was for one period during the game very effective against Yale in 1902 and which was a very ferocious attack and difficult to bring to a halt. With it Harvard went from the middle of the field by steady consecutive short gains until within the ten-yard line of their opponents, where they were finally held. Graydon at full back was a man who weighed over 180 pounds and a strong runner. In fact, Harvard's back-field was especially powerful and in this formation, with Shea, a heavy tackle, behind the back, the impact with the opposing line was almost irresistible. As a coach, examining this formation in the illustration, will see, the play can be sent at any point in the line from tackle to tackle and even outside, and Harvard used a double pass where the mass of the interference went forward and the ball was handed to a half-back who, hugging the interference rather closely, went around outside of tackle.

Illustration No. 4, on page 16, shows the method of opening the line for a quick push though near the centre. This was a play

that, combined with hurdling, was one of Princeton's most effective plays in the season of 1902. In the Cornell game it opened the Cornell line on several occasions.

Illustration No. 5, on page 18, made in one of the most important of the great matches, shows several points that can be studied to good advantage by both coach and player. In the first place, it shows a most excellent pass-back for the kick. The ball is in midair and going on a line which, from its position, as well as the position of the players, shows that it is going rapidly and not too much up in the air. The opponents will have very little chance to interfere with this punter, for he will get the ball long before they have succeeded in getting through the line. Another point shown is the protecting of the kicker on his right side, that is, on the side of the foot with which he makes the punt. The two backs, together with the quarter, are shown in good position here to attack any man who gets through on that side. Meanwhile the line seems to be successfully holding the men. Out at the ends will be noticed two little groups of three each. This shows two men each flanking an end. There is a good deal of difference of opinion as to the advisability of this method of play, but if it is to be done this shows how it is effected. The men, it will be noticed, are so arranged as to prevent the end from getting down the field under a kick. If he can get by these men—and get by them quickly—he may yet get down, but it looks as if it would be a pretty hard proposition. Another way to flank the end is to have a man take him further down the field, and here one man is more serviceable than if he were up directly opposite the end.

Illustration No. 6, on page 20, shows two men flanking an end and holding him well boxed. The man in the foreground, with his back directly toward us, is in a fair way to make use of his arm in an unfair manner, but it may be he will not touch his opponent with it.

The illustration on page 22 (No. 7) shows Captain Weekes of Columbia, one of her best and fastest end runners, making a try around the opponents' left end in what might be called an unprotected end run. His line has taken care of their men out to and

including the tackle who has been boxed. One of Captain Weekes' backs is running for the end and behind him, though out of focus of the picture, comes the runner.

On page 24 (No. 8) is an illustration of a good, clean tackle, and that, too, of a hard, strong runner. The play has come out toward the end and was manifestly a wide end run.

The next illustration, No. 9, on page 26, shows still another method of making an end run where the three men get off practically together and the play is in the nature of the old fashioned long end run. In this illustration the backs have started very quickly and if the play can ever be really effective against the most modern defence it should be in this instance. The writer has very grave doubts as to the advisability of trying too many of these simple end runs in big games late in the season, for, as a rule, they meet with disaster, whereas, some similar play started from a formation has more chance of success.

Illustration No. 10, on page 28, shows a man coming through on a formation play with the back pushing him properly and the runner himself holding his feet well. It is evident from the position of the players that even though the man who has tackled the runner may be a powerful man the force of the push from behind will probably carry the runner through and give him a good gain.

The next illustration, No. 11, on page 30, shows the field of play and DeWitt kicking in one of the big games. It will be noticed that the opponents have come through hard, but have not quite been able to reach him and he is getting off a good kick which his ends, particularly the right end, are in a fair way to cover.

Illustration No. 12, on page 32, gives one some idea of the power that is put in a punt when a man is kicking his best. This illustration is of DeWitt, one of the best kickers on any gridiron, and a man who scored all the points made in the Princeton games against Cornell and Yale in the year 1902, namely, three drop goals, two of them from beyond the 45-yard line.

Illustration No. 13, on page 34, shows a wide end run from a formation play after the play has been well started and

the runner is going to his extreme left. It is a question whether the opponents will be able to interfere sufficiently to get him, as he is pretty well back and has a long way to go.

Illustration No. 14, on page 36, shows line bucking, and the attitude of the man striking the line is a good one for this play. It will be noticed that while he is well bent over, and his muscles thoroughly set, he is still well balanced on his feet and getting a good shove which will make him strike the line with force and at the same time enable him to keep on his feet if he is pushed. This is one of the important factors of modern play and should be well studied by every man back of the line, as well as any line men who are taken back for runs.



WILLIAM A. LEWIS (HARVARD)

DEFENCE

BY WILLIAM A. LEWIS,
Former Harvard Centre and Coach of Defence.

To know how to defend one's own goal in the game of football, is quite as important as to know when to attack opponents' goal. The fact that defence is one-half of the team game makes it essential that every eleven should be well drilled in the fundamental principles thereof. The team with a perfect defence although it may not win, certainly cannot lose. A scientific defence consists in such a skillful and strategic disposition of the players and assignments as will cover every possible avenue of advance and check every kind of attack. The territory through which an opponent may advance is limited only by the width of the field, or one hundred and sixty-five feet. There are eleven men to protect this extended front, seven being on the first line, reinforced by three in the second line of defence and one in the last line. There are three kinds of attack to be met by the team on defence.

First—The flanking movement, or end runs.

Second—The frontal attack, quick dive or mass play.

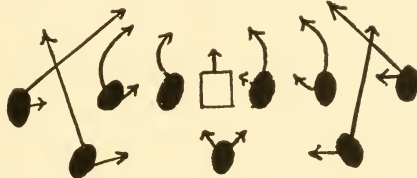
Third—The double attack, a feint in one direction, while the real blow is struck at another, or what is known as trick play. While most teams on the defensive look very much alike, the methods of defence vary quite as much as the methods of offence. Indeed, so great is the variety of defences that no two of the great universities can be said to use the same system of defence.

The simplest defence is one which aims to make the territory through which it is possible for opponents to advance as narrow as possible, upon the theory that the less the length of front exposed or necessary to be defended upon a given play, the better seven or eleven men can defend it. A close line on defence seems best adapted to accomplish this result, that is to say, the ends should play about eight or ten feet from the tackles, the tackles.

from three and a half to four feet from the guards, the guards a foot to a foot and a half from the centre; in such line there are no great intervals to be filled by the secondary line of defence or the three backs; the men are near enough to each other to unite in defence against the mass play, close enough to prevent the quick dive and extended sufficiently for the double attack or quick play. The ends are near enough to the opposing backs to come in on a sharp angle, break up end runs before they take form or get under way, drop the runner in his tracks or drive him into the centre, where the centre trio holding firm, the wings swallow up the play, so to say. In such a system, the ends are responsible for the outside, but should never retreat and thus open up the line of attack, but should take a bee-line to the opposing back nearest his end. In this way he will often get the runner unprotected and almost before he gets started. To enable the ends to play this style of game, the rush line half-backs must follow the ends fast and close, making sure that nothing gets outside, and yet be in a position to cover ground between end and tackle, if need be, or to run behind their own line and back up the other side. The tackles are primarily responsible for the territory between them and the ends and secondarily responsible for the territory between them and the guards. They should charge their opponents' backs and go through generally on the outside, care being taken not to allow themselves to be forced too wide and thus give the guards too much ground to cover.

The guards look out for the hole between themselves and the tackles primarily and the hole between themselves and the centre secondarily. They should charge the opposing guards back, if possible, into the centre hole and take the tackle holes themselves. The centre rush stands guard over both centre holes, assisted by the quarter-back; the centre should stand squarely in front of his man and the moment the opponent snaps the ball charge him backward, keeping him off at arm's length so as to be able to get into either hole. The quarter-back hovers just behind the centre to back up centre and either side of the line. The full-back stands in the back field at about the distance covered by opponents' punts

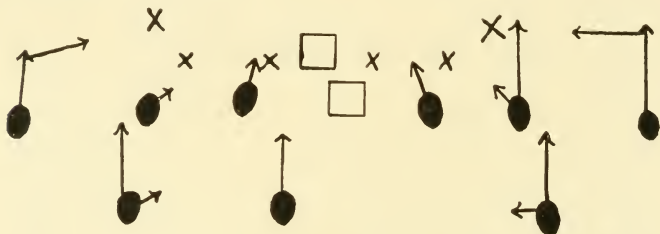
and always moves up toward the line on every play and then falls back again, the purpose being that should the runner break the line, the full-back can take him much nearer the line of scrimmage and thus save distance. A team playing this system will look something like the following figure:



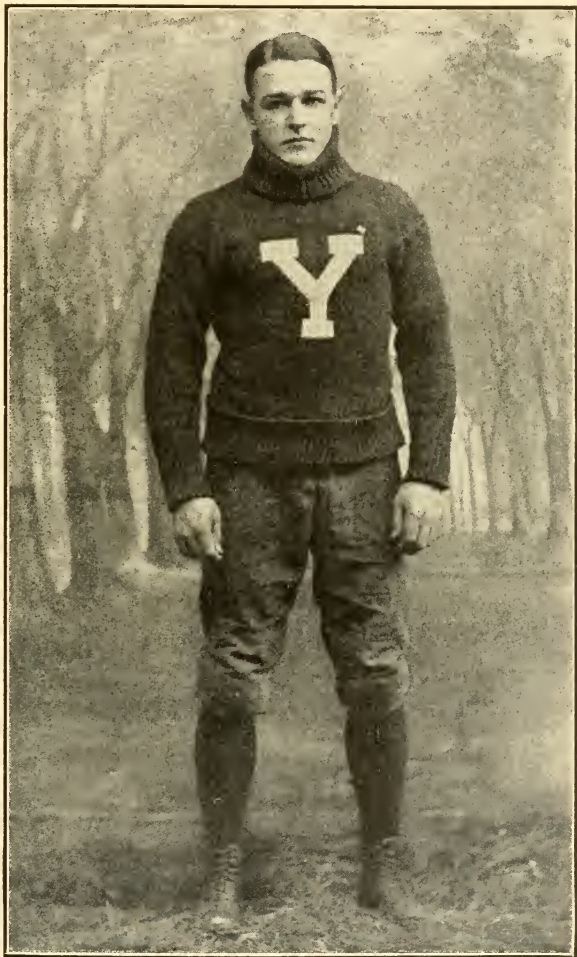
Long arrow denotes primary responsibility, and short arrow denotes secondary responsibility.

Another system of defence used with marked success is the extended line, where the players are deployed at much wider intervals. In this system the end plays from twelve to fifteen feet from the tackle, the tackle five to six feet from the guard, the guard two to two and a half feet from the centre; the half-back plays just behind, a trifle to the outside and to the rear of the tackle; the quarter-back opposite the interval between the left guard and centre and to the rear. The end tackle and half-back on either side work in a triangle, the tackle being at the apex. The tackle plays outside of his opponent so that he can go through cleanly without getting mixed up with him. In case of an end run, the tackle breaks up the interference and the end and half take care of the runner. The end does not come in at once, but advances at right angles with the line of the scrimmage, and there waits to size up the situation. In case the play is inside of the tackle, the tackle dashes in to get the runner or take off his assistants. The left-guard plays wide facing in toward centre, so that he can go in through the guard and tackle hole cleanly and stop all runs at that point, or go straight ahead at the centre hole and help the quarter-back look out for that hole. The centre rush charges to his right and the guard on his right facing in toward centre protects the interval between the right guard and

centre, the other holes on the right are defended the same as on the left. The object of this system is to get as many men through the line into the opponents' territory as possible; playing wide gives better opportunity for avoiding blocking. Three well trained backs fill up the interval left in the wake of the forwards. The alignment in such a defence would look something like the following:



No system of defence, however, is stronger than the individuals who execute it. The individuals should be thoroughly drilled in whatever system is used and should be developed to the highest degree of skill and efficiency as players in their respective positions of end, tackle, etc. The first principle of any defence is to get through with the ball, get into opponents' territory, so as to tackle the runner behind his own line, or to break up, scatter and disorganize opponents' attack. Once the runner gets to the line of scrimmage in good form with his team back of him, he is likely to make some distance against any eleven.



JOHN LONGER deSAULLES (VALE)



FIG. 1—THE POSITION OF THE QUARTER BACK AS THE BALL IS ABOUT TO BE PUT INTO PLAY

HOW TO PLAY QUARTERBACK

BY JOHN LONGER DESAULLES,
Former Yale Quarterback.

The quarterback of to-day in his relationship to a foot ball team must be a good general, must have an abundant supply of foot ball nerve, almost twice as much physical endurance as any other man on the team, and an ability to handle the ball cleanly and swiftly. He must be a good general, because the quarterback in these days runs the team. He must have good foot ball nerve to be able to handle punts in the face of the opposing team running down the field to tackle him, and to brace up his own team when playing against heavy odds. He must have superior physical endurance on account of the many duties required of him, namely, to protect the back field from a runner who has passed the forward line, to catch punts, to give out the signals clearly (taking advantage of his opponent's errors), and to be in every play as an active interferer. Beyond all this, under the new rules he must be able to run well with the ball; but most quarter-backs make good half-backs when necessary.

DUTIES OF THE QUARTER.

On the offensive, i. e., when his own team has the ball:—

POSITION.

As in Fig. 1. Quarter directly behind centre, hands spread out in most natural way to receive ball, knees bent in an easy position with feet well separated, so that backs can see the ball, as in Fig. 2. Neither foot should be advanced, but both should be in a straight line parallel to the rush line. The quarter should be in his position, and the centre also, before the rest of the team. That is, he must be waiting for his men to find their positions and not force them to wait for him to find his.



FIG. 2—REAR VIEW OF FIG. 1. FEET WELL SEPARATED
SO THAT THE BACKS CAN SEE THE BALL

RECEIVING THE BALL.

Receiving the ball properly from the centre is a most important factor. The quarter cannot practice this too much with his centre, in order that he need not worry about how high or how low the ball will come from the centre, or how fast or how slow, but may know that he will receive it with a uniform speed and at one height constantly, thereby feeling that he has only to consider how quickly he may get the ball to the runner. The quarter should coach his centre from time to time, letting him know when the ball is not coming exactly right, and showing him just where and at what speed he wants it. In case of a fumble between centre and quarter (and this should be stamped on every quarter's heart), *drop on the ball, don't try to pick it up.*

No strict rules can be laid down governing the receiving of the ball in respect to height or speed, as each quarter may have his own preference, but practice with the centre will settle this point.

PASSING THE BALL.

(a) On end plays.

(b) On line plays.

(a) END PLAYS.—Where a back runs with the ball between guard and tackle, tackle and end, and around the end, the ball should be passed, and in plays of this kind should leave the quarter's hands as soon as possible. In Fig. 3 the backs have started for left end, the quarter has taken but one step, is in a position to let the ball go immediately and at the same time is ready to sprint ahead of his interference. On a play around right end his first step is taken with the left foot. The sooner the quarter gets the ball to the runner, the faster the play moves, as the back cannot get his speed up until he has the ball. The quarter must hurry his backs, at all times keeping the ball in front of them, never making them wait for it, but rather work to get it. This is especially true on what is known as a straight buck or quick opening; that is, when either half takes the ball through the line between guard and tackle on his own side of the centre. In this case the quarter should toss the ball as soon as his hands



FIG. 3—POSITION OF QUARTER AFTER FIRST STEP FOR A PLAY AROUND LEFT END

have closed on it, directly to the half who has started for the opening, without letting his hands come in as far as his body.

(b) LINE PLAYS. For plays between guard and centre or when line men are running with the ball, the ball should be placed in the pit of the stomach, and handed, not passed. In Fig. 4, the quarter is ready to place the ball in the fullback's stomach, then to hold him up when he reaches the opening between guard and centre, while the other backs push him through. It is a quarter's duty at all times, to support and interfere for his runner.

RUNNING WITH BALL.

This added privilege within the two twenty-five-yard lines gives to the quarter an opportunity to act as a punter half-back and in this work his duties are the same as those noted in instructions to half-backs. Some teams will use heavier quarters on this account.

DUTIES ON THE DEFENCE.

The opposing team having the ball in their possession:—

The quarter, when the opposing team has the ball, should stand from twenty to thirty yards back of the line of scrimmage, and SHOULD NEVER UNDER ANY PRETEXT RUN UP TO MAKE A TACKLE. When an opposing runner has passed the line of scrimmage, and has cleared all tacklers except the quarter, the quarter should work over in front of the runner and wait for the runner to come to him, keeping steady on his feet.

Handling punts well will only come with long practice, but it is essential that a man handling a punt in the back field should keep both his eye and mind firmly fixed on the ball, and pay no attention to the tacklers coming down the field, until after the ball is caught. While in the back field, the quarter should be constantly coaching the men in the line, and if he sees a fault *he* is the one to correct it.

GENERALSHIP.

The signal should be given *immediately* after a play is over, and if a quarter adheres closely to this rule, he will find his team working much faster. Should it become necessary to repeat

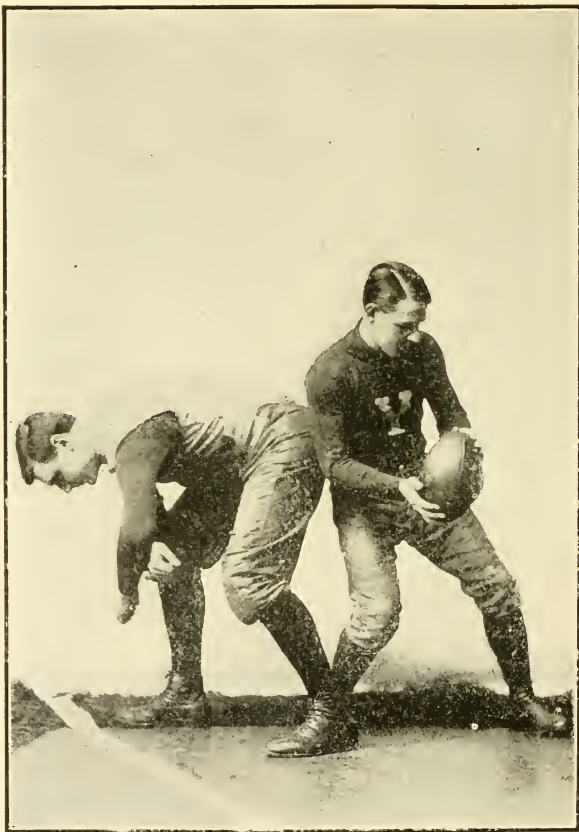


FIG. 4—POSITION OF QUARTER ABOUT TO DELIVER THE
BALL TO THE FULL BACK FOR A PLAY BETWEEN
CENTER AND LEFT GUARD

a signal do not repeat from the crouching position (Fig. 1), but as in Fig. 5. In this position the quarter also can see every part of the opposing line, and size up the best place to direct the next play.

In running, the backs do not burden any one man with too much work, except when a gain is imperative, then use your best man, even if you have worked him hard before. Trick plays should be avoided inside your own forty-yard line, unless time is nearly up and you must score or lose the game.

In the game, be deliberate in initiating the play, but when once started go ahead with determination and dash. At all times observe closely the opposing line, and if you discover an opponent playing too wide send a player there.

If you are gaining at a certain place, do not be afraid to work it for all it is worth, until you cannot gain there any more, then it will be time to try another play.

It is not possible to go into the details of the manifold duties of a good quarter, for the demands of the game and the responsibilities of the position require a man resourceful and adaptable in meeting constantly changing conditions as they present themselves. Such suggestions as I have given represent only a basis of the quarterback's chief duties and will serve, I hope, to stimulate those who may be trying for this position and raise the standard of their play.

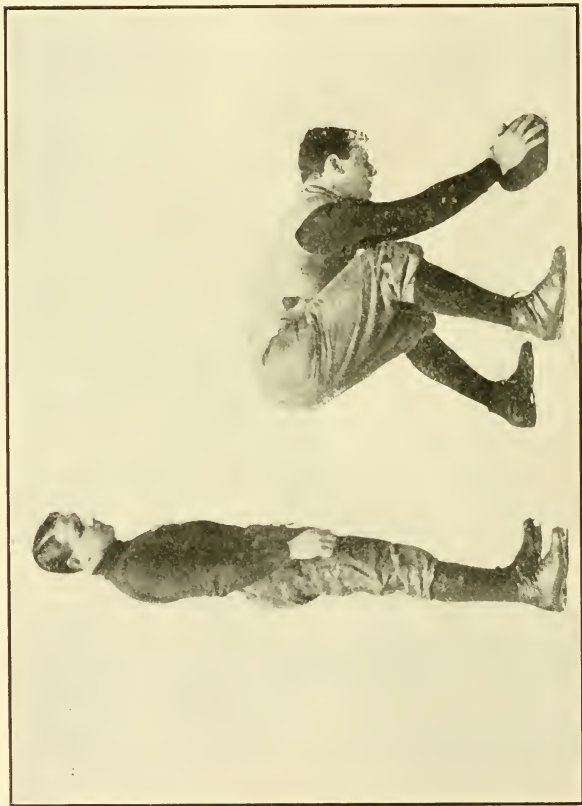


FIG. 5—IF IT BECOMES NECESSARY TO REPEAT A SIGNAL THE QUARTER
SHOULD ASSUME THIS POSITION

PLAY OF THE BACKS

BY W. T. REID, JR.,
Fullback Harvard Foot Ball Team of 1899.



Properly speaking, the term "backs" refers to the quarterback, the two half-backs and the fullback. This article, however, will deal only with the three latter positions, leaving the very technical work of the quarterback to some other writer.

The three backs, as we shall term them, are closely associated in everything that they do. On the offence they alternate in carrying the ball and in pushing each other along, while on the defence at least two of them, and sometimes all three, are called upon to force the rush line. And they are usually of about the same size and weight.

With all these points of similarity there is much that belongs to each separate position that goes to make it unwise for a back to attempt to play in more than one position. For instance, if the right half attempts to play at left half he must accustom himself to the use of the right side of his body in interference instead of his left, to starting toward the right side of the line for many of his main plays instead of to the left, to receiving the ball from the quarterback from another angle, and in general to an almost exactly opposite way of doing things from that to which he has been accustomed. From these observations it must be clear that while the duties of the various positions are just different enough to make it unwise to change players about, they are nevertheless so nearly alike

fundamentally as to make it possible to deal with them as a whole, thereby saving much repetition and unnecessary explanation.

QUALIFICATIONS.

The mental qualifications of a good back are first of all that he shall enter into his work with the proper spirit. Unless he has this spirit—that is, unless he is willing to subordinate his personal wishes to the general welfare of the team, and what is more, to do so heartily and enthusiastically—he cannot hope ever to be a great player, even though he have marked individual ability along every line of play. Team play is the essence of successful foot ball, and he who is looking first of all to his own interests will never make a “team” player; he will not contribute his share to the *esprit de corps* of the backs, and he will never “fight” for all he is worth from the beginning of a game until the end.

Besides having the proper spirit he should be heartily co-operative; he should be full of aggressiveness both on the offence and defence; full of sand and grit, and imbued with a reasonable amount of judgment. Physically a back should be compactly built, strong and quick, never slow or clumsy, and should weigh anywhere from 165 to 190 pounds. Finally, he should have the knack of not getting hurt. Some men have this to a marked degree, and almost never get hurt, while others are equally unfortunate and are constantly being injured. As team play is dependent upon “drill,” and that in its turn is dependent upon the individual, it is easy to see why an “immune” back is most desirable.

EQUIPMENT.

As a general rule less attention is paid to the question of equipment than to almost any other subject connected with foot ball. This is particularly true of the novice, who is likely to enter his first game only half supplied with proper clothing, and who is more than likely to come out of it in an unnecessarily battered condition.

A player cannot provide for himself too well. Not that I favor bundling up all over with heavy pads, protectors, etc., but that I do believe in affording ample protection to those spots where experience has shown the greatest number of injuries to occur.

The player should see to it that his shoes are well suited to his own peculiar needs. They should not be too thick, too thin, too heavy or too light. They should cover his ankle bones and be provided with a good soft tongue to protect his instep from the shoe-lacing. The cleats should be long or short, many or few, broad or narrow, according to the work the back expects to do. In case he plans to do kicking a box toe may be necessary.

Besides his shoes the player should wear some style of ankle supports. These should fit well, should be well sewed to prevent ripping, should not be of too heavy material, such as will tend to stiffen the ankle too much, and should not be laced too tightly. Such supports will save the ankle many a severe wrench.

Suits should be made of light-weight material. Trousers are frequently worn without a jacket. In such a case every care should be taken that the weight shall hang from the hips and that the belt shall not hinder breathing. The latter point is a very important one. In case a combination suit is worn care should be taken that the weight of the suit is borne by the hips rather than by the shoulders. The trousers should be well padded at the knees, and in such a way that the pads come over the knees instead of above or under them. The front of the thigh should be protected from "charley-horse" by shin guards inserted in the trousers, and the hip joints should be well protected by ample pads.

The jersey should be provided with pads at the elbows and on the shoulders. In each case they should be large enough so that a slight shifting of the jersey may not expose the tender spots. The under side of the jersey under the arm-pits should be lined with linen or chamois skin in order to keep the dye from getting into any chafing that may happen there.

A plain head gear is a good thing as a protection to the scalp, and a nose guard a good thing after an injury to the nose or teeth, otherwise it only shuts off the air and renders a player timid in case it gets torn off during scrimmage.

FUNDAMENTALS.

Too much emphasis cannot be placed upon the necessity for thorough drill in fundamentals. These fundamentals consist in falling on the ball, passing it, kicking and catching it, and carrying it. To these may be added starting, tackling and interfering.

"Falling on the ball," or more properly speaking, falling around the ball, should be practiced while the ball is at rest, and then while it is in motion, to the right, left, front and rear. In any case the player should be very careful not to dive at it in such a way as to drive the top of his shoulder into the ground, when a bad bruise or injury is likely to result, nor should he ever attempt to fall flat upon the ball, this to prevent his having his wind knocked out or his chest injured. Instead, he should fall either so that his weight shall be on his elbows or knees, or else so that his body at his waist is doubled up around the ball, which he should hug close with his hands and arms.

In diving for the ball the back should dive as near to the ground as possible, thus preventing an opponent from getting in under him. He should always see to it that his body is between the ball and the direction in which it is moving, or between the ball and an opponent. These points make for added safety and protection.

Backs should have enough practice in passing balls to feel thoroughly at home with them. They cannot be sure of this unless they handle new balls, wet balls, old balls and dry balls, and unless they handle them incessantly.

If possible, all three backs should be able to kick—at any rate to punt. Unless this is the case a team is likely to find itself without a kicker, perhaps in the midst of some important game. Even more attention should be devoted to catching, for almost nothing in foot ball may result so disastrously as a bad

fumble in the back field. Unless a back is sure at catching, or shows signs of becoming sure, with practice and experience, he should never be allowed to attempt catching. Bungling work in the back field is the most demoralizing thing that can happen to any team.

Carrying the ball is the main function of the backs, hence the need of knowing how to carry it safely. This depends upon the way in which the ball is held. For end runs one end of the ball should be tucked under the arm—not too far under, so that it can be knocked out—while the other end should be firmly grasped and covered with the hand. In bucking, the ball should be held in the pocket formed by the stomach and legs, as the runner crouches, with both hands, though in case a back feels that he has the ball secure there is no reason why he should not use one hand to ward off opponents. In the case of end runs the back should be prepared to ward off runners with either hand, changing the ball when necessary from one side to the other. And whether bucking or running, a back should never allow himself to loosen this hold on the ball, owing to the necessity of giving much attention to passing some particular opponent. The grip on the ball should be automatic and vise-like. Where a back is uncertain of his hold he may get good practice by bouncing a ball against a wall and then clapping it at once into position on the return.

It is of course necessary that the backs should tackle and interfere well. This means that they should both tackle and interfere low—the only difference between the two being that in case of a tackle the runner takes hold of his man, while in the interference he does all that the tackler does except take hold. A high tackler or interferer has no place behind the line, particularly in these days of heavy mass formations.

Finally, no back can be effective who does not start quickly. An offence which is so slow in reaching its object as to allow a concentration of opponents at that spot before the play hits is of course worthless. The attack must be quick and hard. For this reason the backs should constantly practice getting off quickly

and getting up their maximum speed instantly. There are several ways of starting. Some backs stand in a crouching position, with one foot a little in the rear of the other, and with the knees turned well in. This enables them to start to the right or left or to the front without a moment's loss of time and with great initial power. Other backs assume a sprinting start. Both ways are good, in fact any way is good that will enable a back to get off quickly and in any direction. The things to be avoided are a momentary straightening of the back at the instant of the start, and a short backward step. In case the latter step seems necessary the back should take his position with one foot back to begin with, thus making it unnecessary to take an additional one. There should be no backward motion of either foot.

In general, backs should exercise extreme care to prevent unevenness in starting. Starting too soon or too late is only productive of fumbles and offside play, to say nothing of the upsetting influence which it produces throughout the team.

OFFENCE.

The position of back is one of the most exhaustive ones in all foot ball. At no other position is there so little opportunity for rest or let-up. It is go, go, all the time, first with the ball, then in the interference, then on defence. It is necessary, then, that a back should always be in the very best of condition, never overworked, always full of vigor and life. It is better to underwork a back than to overwork him.

Of the two half-backs on a team it is generally planned that one shall be a good end runner, the other a good plunger or buckler. Such an arrangement gives more all around possibilities to an eleven, particularly where there is an opportunity for broken field running.

On the offence the position of the backs will depend upon the style of game that is adopted. Sometimes they are played a full five yards behind the rush line, on other occasions they are played a scant three, while on still other occasions they form at even greater or less distance. The possibilities of formation are never

ending. Whatever the system, however, the backs should always assume exactly the same relative position with relation to the ball and to each other. Precision in this respect is absolutely necessary to well developed team work. Furthermore, this position should be assumed as soon as possible after the ball is "down." When in position, and just previous to starting, the backs should take every precaution to prevent giving the direction of the play away by unconscious glances, movements or "leanings." It is also well for the back to save himself whenever he can from the nervous tension of prolonged waiting. Many backs subject themselves to some such strain by getting onto their toes several moments before the ball is to be put in play, or by not "letting up" at the call of "time." This may be avoided if the back will "key himself up" just at the last moment. But above all a back should be steady. He should never in all his play slow up for his interference, or ever allow any other back to be slowed up by dilatoriness on his own part. He should start instantly and "dig"—never letting up an instant for anything. He should play with indomitable spirit. If he fails to gain the first try he should grit his teeth and *make* it gain the second.

In end running a back should be careful not to run too close to his interference when in case the interference is upset he is likely to fall over his protectors. Instead he should run with a little interval between himself and his interference, thus giving himself a chance to see where they are going and to take instant advantage of any upset. Where possible it is well for a back to run low so long as he can see where he is going, for by so doing he is likely to cause his opponents a moment's delay in locating him. When tackled he should aim to fall forward. To this end he should run with his body slanting forward, where it is exceedingly difficult for an opponent to overcome the combined power of gravity and the player's efforts. After falling, a back should never hold the ball out at arm's reach, as there is danger that it may be stolen from him.

In bucking, one of the very important points to be kept in

mind is that of keeping the eyes open. A back who closes his eyes as he makes his plunge is likely to fall flat on his face when an opening in the line presents itself suddenly where he had expected to find the passage choked. A back should never allow himself to hesitate or slow up as he strikes the line, he should strike it while at his maximum speed. A back may run high or low, according to circumstances, particularly so long as he keeps his feet—a most valuable quality. It is also wise for the back to take short steps, as in this way he is not so likely to find himself too much spread out where the footing is hardly firm and where it is almost impossible to get his feet under him in case of some sudden shove or push. The legs should accordingly be bent as the back strikes the line, because in this way he is able to exert much lifting power in case of need. The arms and hands should also be used to make progress. Many backs lose much of their effectiveness because they utilize only a portion of their power. The feet should ordinarily be kept on the ground, because only when they are there are they of much service. When, however, there is an imperative need of making a gain of a foot or so the back had best dive at the line—this being especially applicable to the full-back. Hurdling is sometimes a very good thing, but is not so consistently effective as bucking, where the feet are on the ground. When downed after a buck—or after any play, for that matter—a back should instantly straighten out so that there are no doubled up joints for succeeding players to fall upon. Where a back is attempting to assist a fellow player along he should aim to get him low and boost him along with the shoulders, rarely with the hands. And under no circumstances should he give him a final shove in the neighborhood of the shoulders, for this is certain to cause the runner to topple forward. In case a back is tackled and seems about to fall a fellow player can often be of great service if he will grasp the runner by the arm or elbow, and at the same time that he holds him up pull him forward. It frequently happens in such a case that the runner will shake off the tackler and make an additional gain of several feet or even yards before being finally downed.

In attempting line bucking the back should keep his chin close in to his neck, so as to prevent having his head twisted back over his shoulder, and he should also buck with the muscles of the neck held tense. This will tend to prevent bad wrenches of the neck and possibly injury to it. When in the midst of a line-bucking play which has resolved itself into a pushing contest between the two teams, the back should seek an outlet at the point of least resistance, usually to be found by feeling his way in different directions.

In case a back feels any doubt about the signal for a play he should at once call out: "signal." Otherwise collisions, fumbles and confusion will result. And no matter what a back thinks, he should invariably follow out the signal. The fault is not his if the play does not gain, but it is absolutely his fault if he does not go where he is directed. This rule should be absolute.

Another rule which should be invariably followed is that of never running back. It is a back's function to advance the ball. If he is unable to do so he should at least never lose ground.

If a back fumbles he should fall on the ball at once, never attempting to pick it up unless it bounces high. Attempting to pick up a fumbled ball is only making a bad matter worse. A back is responsible for the ball if it comes to him, and he should always remember that the possession of it is of the first importance.

It is the half-back's duty to afford proper protection to his kicker. He should afford it. He should also be reliable in getting any particular opponent who may be assigned to him to keep out of a given play out of the play. He should put his entire strength into every play and should always have his "nose on the ball." He should follow it everywhere. Mr. Forbes has hit the nail on the head in this respect when he says: "A man's value to his team varies as the square of his distance from the ball."

In the midst of play, whether on the offence or defence, the

backs should seek to encourage each other by a word, a touch or a look. Such simple though effective aids to thorough sympathy and harmony between them should never be overlooked. A hearty word of confidence spoken immediately after a bad fumble or other blunder will always cause the unfortunate player to put new life and determination into his work, while a bit of cutting sarcasm will drive him to anger or else dishearten him. When off the field a back should never allow himself to make unfavorable comments on any of his fellow players, unless indeed it be to the coach or captain. Nothing is so likely to spoil relations among players as criticism—offered behind the back. Certain annoyances should be borne for the sake of the team, even though they may be at times very exasperating. When a fellow back or fellow player is injured and confined to his bed nothing will so contribute to hearty relationship as frequent calls and anxious solicitation for recovery.

DEFENCE.

On the defence the backs have not so much detail to look after as on the offence, but it is very important detail, all of it. Each has his particular station behind the line, with its primary and secondary responsibilities. Just what these positions are, whether far from the rush line, near to it or in it, must depend upon the style of game that is being played. Suffice it to say, however, that all styles are planned to the same end—to stop opposing plays.

As a rule the backs are so distributed as to most broadly cover the possible openings at which opponents are likely to direct their plays. Consequently as the opponent's offence varies, so should the defence. Sometimes it seems well to attempt to meet opponents behind their own line, at other times to meet them at the line, and on other occasions still to meet them behind your own line. Again, a back is sometimes held responsible for a run around the opposite side of the line from that on which he is stationed, so that the various combinations of responsibilities, due to the tactics of any particular opponent, are never ending.

Ordinarily the backs are looked upon as forming a secondary line of defence. In such a case they must exercise great care not to get drawn into a play too quickly, and yet they should be equally careful not to wait too long before attacking the play. A back who waits too long is as bad as one who goes in too early. A happy medium is what should be aimed at, and it can be obtained only by constant practice and vigilant watchfulness. To exercise this vigilance the back must needs stand high enough to see where the play is going, and at the same time not be so high as to allow of being struck by an opponent while in an extended position. The instant a back sizes up a play he should get as soon as possible to the point of attack, watching carefully for trick plays all the while. A back will seldom be fooled by such plays if he will always keep a close eye on straggling players, and remember that the ball, not the motion of any mass, indicates the point of attack. In attempting to stop end runs, and in fact in stopping any play, a back should never allow an opponent to hit him with his body; he should keep his opponent away with his arms. A back has no business to allow himself to get hit. In meeting heavy mass plays the back should either dive at the base of the head of the play, grabbing an arm full of legs, or in case he is too slow in getting there and the play is dragging along he should, if chance offers, seek to swing the head of the play to one side where the direct line of pressure is broken and where a momentary delay will give his own players a chance to down the runner before the opponents have a chance to reorganize. Many times one man can upset a mass play effectually, where had he tried to tackle one of the players he would have been thrown off or dragged along some distance further.

The question as to whether a back shall break through and attempt to tackle behind an opponent's line is a very difficult one to treat. Sometimes, where a back is strong on the defence and the opposing line is weak it is advisable. But where the opposing rush line is a strong one and particularly where it is stronger than your own it is certainly inadvisable. In such a

as of the rush line. Otherwise, in case an opponent clears your rush line, a long run is likely to follow.

In everything that they do, whether on offence or defence, the three backs should combine in every possible way with the quarter-back. The centre rush, the three backs and the quarter-back should practice constantly together so as to get the purely mechanical work of their positions well ordered, and in a contest the three backs should keep the quarterback constantly informed of weak places in the opposing defence, that he may profit by them when occasion demands. In a nutshell, all four backs should strive for mental, moral and physical team play both on and off the field.

BACK-FIELD WORK.

In the back field, the main function of the backs is the handling of kicks, and it is one of the most trying functions of all foot ball. To have to catch a ball while one's opponents are in many cases standing within arm's reach like so many wolves ready to take advantage of the slightest slip up is bad enough, but when these conditions are augmented by the necessity of judging a high kick in a gale of wind they become well nigh unbearable except to the coolest, most skillful and best drilled players. Such, however, is the trying position in which backs often find themselves on thirty or forty separate occasions in a single game. And worst of all they are severely censured where they fail of a clean record. A team can never know how much kicking it is likely to meet in any game until the game is on, and it can never know when the winning or losing of a game may turn upon the safe handling of a single kick. The possibilities of catastrophes are greater in the back field than in any other branch of foot ball play, and so it is imperative that only the most reliable men should represent an eleven there. The backs, then, cannot be given too much practice in catching kicks under every possible condition. They should practice with ends running down on them, with the wind against the kicker as well as case the backs should hold themselves as reserves rather than as with him, with a wet and dry ball. Furthermore, they should

be given an opportunity to handle rolling, bouncing and twisting balls.

Under ordinary circumstances only one back is kept in the back field. It is his duty to handle all unexpected kicks and to tackle any runner that may get by the other ten players. He must be a sure catcher and tackler, and something of a kicker. This back may find himself on some occasion in the very trying position of being the only man between his goal and a fast opponent. When this is the case the back must, as a general rule, depend upon his own initiative for his line of action. No one else can lay it out for him. There are, however, one or two points which any back will do well to keep in mind. It is always a good plan to try to force the runner to take that direction that will bring him nearest to the side line, where it may be possible either to corner him or to force him out of bounds. There is little sense in undertaking to tackle a runner who has the whole field to manœuvre in, when you can reduce the field by two-thirds. Another point to be kept in mind is that of never running at full speed at a runner whom it is your intention to tackle, especially when he has an opportunity to side-step or dodge you. This side-stepping is the easiest thing imaginable where the tackler bears down on his victim at full speed. It is frequently illustrated when ends over run a full-back, who by a simple side-step eludes them and makes a good run. Instead, the back should run fast toward his opponent until he gets within fifteen or twenty yards of him, when he should slow up and get ready to respond to dodging, which can only be done when the back has full control of his body. And he should exercise great care not to be fooled by some false motion on the part of the runner. This false motion is usually given with the upper part of the body, and can only be detected by keeping a close watch of the hips, which will always give away the real tendency of the body.

In case it may at some time seem advisable to utilize the defensive ability of the goal tender, as we may call him, on the rush line, and consequently to put another man back there in his place, a sure catcher should be chosen even if he is unable

to do much at open field tackling. The reasoning here is that where a back is given one opportunity to prevent a touchdown by a decisive tackle in the open field—which is frequently missed by even the best players, owing to the tremendous speed of the runner—he is given twenty chances to catch the ball where any one catch, if missed, might mean a touchdown. Under these circumstances it is of course better to provide for the common play rather than for the emergency. The goal tend should keep a sharp lookout for trick plays and where possible keep his fellow players posted by calling out advice which his distance from the scrimmage may enable him to give.

The moment the opponents give evidence of an intention to kick, one or two of the other backs should at once drop back to reinforce the goal tend. Care must of course be taken that the evidence is genuine before they go clear back, but once they feel sure of this point they should run back at full speed, looking over their shoulders about every ten yards to prevent the kick from surprising them, or else to be ready for a return to the line in case of a fake. Backs frequently loaf back to their position. This is all wrong; they should be either on the line or way back of it, with as little time as possible wasted in getting into either position. The distance of these backs from the rush line and their relative positions in the back field will depend upon circumstances. If the kicker is a good one and has the wind at his back they should of course play further back than if he is a poor kicker and has a stiff wind against him. The thing to be avoided is the danger of playing too far back. This is a very common fault among novices, who dread having the ball kicked over their heads and who, in order to prevent such a catastrophe, play so far back that it is impossible for them to catch more than three out of five of the shorter kicks, owing to the impossibility of getting under the ball. It is better policy to take one chance in fifty of having a kick go over one's head for the sake of catching the great majority of them than it is to prevent a kick over one's head at the expense of having to handle them on the bounce, where the opportunities for gaining ground after the catch are *nil*.

No ball should be allowed to bounce. They should all be caught on the fly, and if balls are bouncing it shows that the backs are not covering the ground in a thorough manner.

Once they are the proper distance behind the line the backs should spread out in such a way as best to cover the territory in which the ball is likely to fall. To this end they should not stand too near each other or too near the side line. If they stand too near together they will overlap much ground, and if they stand too near the side line they will enable themselves to catch many balls which go in touch and which there is no need of providing for, while at the same time they will be unable to cover much important ground within the field. The backs should play far enough apart so that they can concentrate at any given spot in time to be of assistance to each other either in catching or in the interference. In case a strong wind is blowing at the kicker's back one of the backs should play a little in rear of the others in order to provide for a possible misjudging or for fumbles. Under ordinary conditions one of the backs should play well in front of the others in order to be ready for short kicks or other tricks. In case one of the backs essays a fair catch the others should be on the watch for a fumble. The best way to get practice on these various points is to put two sets of backs, with centre, at work kicking and catching. Then a competition may be encouraged with the result that all the players become interested, and in the endeavor to win the competition give each other the best practice possible.

Whenever possible it is well to have ends run down under the kicks, thereby giving the backs every opportunity to catch kicks "under fire." Continuous back field practice is very exhausting, so that it is well whenever much practice of this kind is undertaken to have alternate squads of players, thereby saving all of them from overwork. Should the backs become tired of the practice and allow it to become lackadaisical, it should at once be discontinued, as carelessness in back-field practice is worse than none at all.

In preparing to catch kicks the backs should make every endeavor to get under the ball in time enough to enable them

to receive it while they are standing still. To do this they must be able to "size up" a ball as soon as it rises in the air. Catching while on the run should be avoided whenever possible, as it is uncertain and hazardous. In case a back finds it impossible to get under a ball that he is after in time to catch it he should drop back a few steps and allow it to bounce. Under *no* circumstances should he attempt to smother it with his body, arms or legs. This is a very common temptation, but one that should be discouraged from the very first. Where the back allows the ball to bounce he should exercise extreme care that it does not touch him in any way, as in that case an opponent is of course entitled to possession of the ball, if he can get it. If a ball bounces higher than a back's head he should ordinarily be careful not to touch it until it is well within his reach. This is important because if the back, reaching up for the ball, touches it with the tips of his fingers, and happens just at that instant to be tackled, he will not only not get the ball himself but will have put his opponents "on side." Instead, the back should ordinarily wait until the ball is well within his reach before touching it. Of course if the kick happens to be a short, high one, and he fears lest the opposing full-back may put his men "on side," the back is perfectly justified in making a hasty effort to get the ball. The safest way to do this is to jump up to meet the ball, thus saving time and at the same time minimizing the risk.

In running up on a ball the backs should also be careful not to overrun it, remembering that it is much easier to run up on a ball than to run back for it in case it is misjudged. Furthermore, in case a back who is careful to keep the ball in front of him misjudges it and it hits him in the chest, he stands a much better chance of recovering the ball as it falls in front of him than he would have if he overran the ball and it fell behind him.

While in the act of catching a back should concentrate his entire attention on the ball, never attempting to divide it with the opposing ends. The plea that a back often advances for this tendency is that he is afraid of a bad fall just as he is completing the catch, or that he wants to see where the ends

are, that he may dodge them more effectually, etc., etc. These excuses should all be denied on the ground that the possession of the ball is *the* thing. And in this connection it is just as well to say that in case a back fumbles in the back field he should fall on the ball at once. This point should be so drilled into the players that it is second nature to them.

The moment a back has caught the ball he should turn his attention to his opponents, seeking how he can dodge them and run the kick back. In case he catches the kick in time to decide from his own observations in which direction to run a back should experience little difficulty in getting off safely. But when the ball and the ends arrive almost simultaneously the situation is more difficult. In such a position the other backs should assist by a word or two. At first the giving of such directions will end in much confusion, but as the backs become more and more accustomed to each other this difficulty will disappear, to be followed by satisfactory results. Where a back is a good dodger he can often fool opponents by making false start in one direction and then following it up with a real start in another. This ability is natural, and no coaching can develop it except where the player has in him the crude qualities.

One thing, however, every back can be taught, and that is that he shall never run back. Running back in back-field work is even more fatal than in ordinary scrimmage play. Another thing to be borne in mind is that under no circumstances can a back use his "straight-arm" more effectually than in the broken field running that forms such a big part of back-field work. Here it is that opponents are usually few and the time comparatively long for shifting the ball from one hand to the other in order to do this warding off.

With this we may be said to have covered, after a general fashion, the topic embraced under the main title, and therefore to have completed this article. One thing yet remains to be said, however, and that is that no back who wishes to get the most out of these suggestions can hope to do so unless he first puts into himself the right spirit, and follows it up with staunch obedience to his training rules.

SIGNALS

BY ROCKWELL AND HOGAN,
Quarter and Tackle of Yale Team of 1902.

The first essential in any system of signals is simplicity. An intricate and complicated system always militates against the team using it; the quarter is troubled in framing his signals and the speed which should accompany successful play is impossible. The confusion and uncertainty of the quarter affects the other members of the team; they do not jump into the plays with the dash and vim which characterize a team confident of its signals and receiving inspiration from the knowledge that the whole team is working on the same play. It does not follow because your system is simple, that your opponents will make it out. The chances are very much against their doing so, and while they take their attention from the play to watch your signals you gain such advantage over them as will enable you to push your plays so successfully as to give them something else to think of save your signals. Yet in spite of the extreme improbability of discovering your signals it may happen that your team will be discouraged and its play materially affected by believing that your opponents are playing its signals. So, in all the systems given in this article, provision is made for a change, which should be made immediately in such a case; a change which is in keeping with the simplicity of the system and yet sufficient to regain the confidence of your team.

In any system of signaling there are always two considerations: the quarter, or whoever calls the signals, and the rest of the team. The system should be such as will enable the quarter

to give the plays quickly and accurately. There should be no hesitation whatever on the quarter's part. He should practice calling off the plays to himself until he has every one in his control and can use any of them when he needs it. Not only should there be no hesitation on the part of the quarter, but the rest of the team also should grasp the play as soon as it is called. The play originates with the quarter and so is perfectly evident to him, but it should also be clear to the team just as soon as the signal denoting it is given. Very often you will see the quarter call the signal and then wait till the rest of the team understands it before receiving the ball from the centre. There should be no wait. The system should be one to enable the whole team to get the play immediately the signal is called. On the speed with which the ball is put into play depends to a considerable extent the success of the offensive work of the team and, therefore, it is most essential that there should be no unnecessary delay after the signal is called. All the systems taken in this article have those ends in view. They have all been tried and found to conform to the demands of any situation.

For the sake of clearness the different systems are numbered as Code I, Code II, etc. In the diagrams the black solid square denotes the player taking the ball; the heavy, continuous line the direction which he takes; the zig-zag line shows how the ball reached him and the dotted lines the directions taken by the other players, save the one carrying the ball. The dotted squares indicate changes in position assumed by the players in such a play as a wing-shift, etc.

To indicate the positions the following abbreviations have been adopted: L. E., left end; R. E., right end; L. T. left

tackle; R. T., right tackle; L. G., left guard; R. G., right guard; C., center; Q., quarter-back; L. H., left half-back; R. H., right half-back; F. B., full-back.

For Code I a letter system is taken, having as a base a word, or combination of words, containing either ten or eleven letters, in which the same letter does not occur twice. It may be either ten or eleven, as the center may or may not be denoted by a letter. Such words as f-o-r-m-i-d-a-b-l-e, d-a-n-g-e-r-o-u-s-l-y, i-m-p-o-r-t-a-n-c-e, or combinations like p-r-i-v-a-t-e-b-o-d-y, c-h-a-r-g-e-d-w-o-r-k, c-o-n-v-i-c-t-l-a-m-p—any word or combination in which the same letter does not occur twice and which has ten or eleven letters. Take the combination H-a-n-o-v-e-r—C-i-t-y, and beginning with the left end give each position a letter.

H A N O V E R C I T Y
 L.E. L.T. L.G. C. R.G. R.T. R.E. Q. L.H. F.B. R.H.

The letters H, A, N, V, E, R, stand for holes thus:

H—Means end run around your own Left End.

A—Means play through Left Tackle, either inside or outside his position.

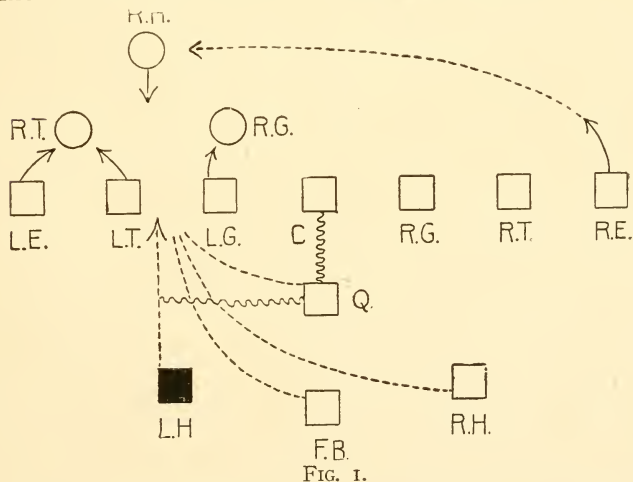
N—Means play through Left Guard.

V—Means play through Right Guard.

E—Means play through Right Tackle, either inside or outside his position.

R—End run around your own Right End.

Let the first letter given in the signal indicate the player who is to carry the ball and the next letter the hole or direction in which the ball goes. For example, let the letters called in the signal be: I, A. The play indicated is the Left Half-back through Left Tackle. Naturally the quarter would call more letters than those merely required to denote the play, so this signal might run in such a way as. "I—A—B—C—D." The last three letters only helping to prevent the signal from being discovered. The following is a diagram of the play:



Your L. T. and L. E. push the opposing R. T. (designated in the diagram by a circle) back. Your L. H. follows straight behind your L. T. with the Q., F. B. and R. H. holding him on his feet and pushing him through the hole. The linemen charge straight at their opponents with the exception of the R. E., who goes in front of his own line and tries to get hold of the man with the ball and pull him along.

Let the signal given be: "Y—E—A—R." The play is the R. H. through R. T. Fig. 2 shows the play.

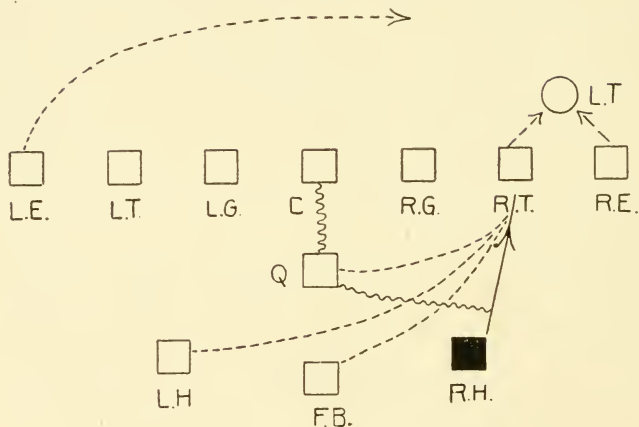


FIG. 2.

Here your R. T. and R. E. push the opposing L. T. back and the L. E. runs in front of his own line, as did the R. E. in Fig. 1, and pulls the man with the ball. For the duty of the other men see the explanation after Fig. 1.

Let the signal given be: "T—V—I—S—T." The play is your F. B. through your R. G. Fig. 3 shows this play.

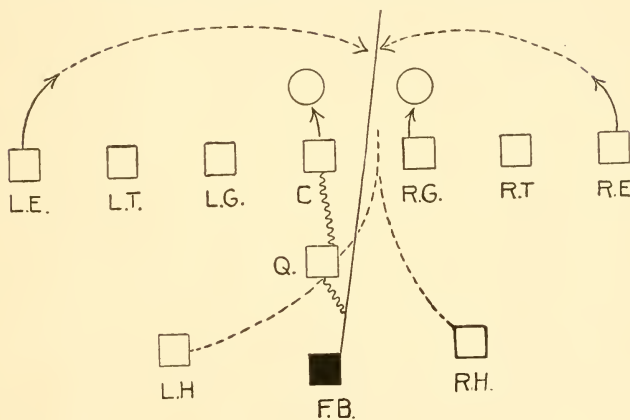


FIG. 3.

Here your R. G. with the assistance of R. T. pushes the opposing L. G. back. The F. B. gets the ball from Q., who must be careful to get out of his way, and follows straight behind the R. G. Your R. H. and L. H. should keep him on his feet after he has met opposition and the two ends, both of whom should have come around in front of their own line, ought to pull him through the grasp of opposing tacklers. All the linemen should push their opponents back and away from the man with the ball.

Suppose the signal is: "T—N—O—K—B." The play is the F. B. through L. G., as shown in Fig. 4.

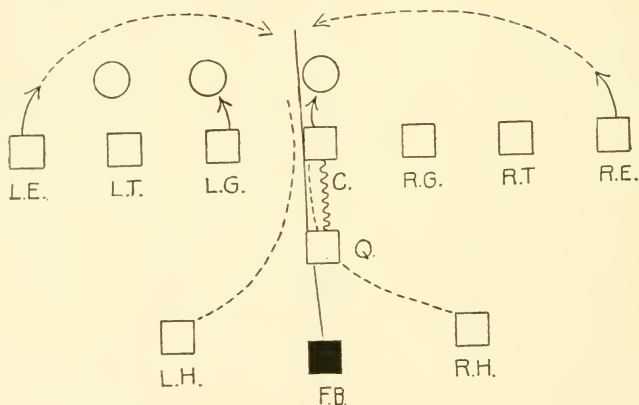


FIG. 4.

This play is exactly similar to that shown in Fig. 3 save that the L. G. and L. T. are the men who make hole by pushing the opposing R. G. out of the way.

Suppose the signal called is: "I—E—D—C—B." The play is the L. H. through R. T., a cross-buck. Fig. 5 shows the play.

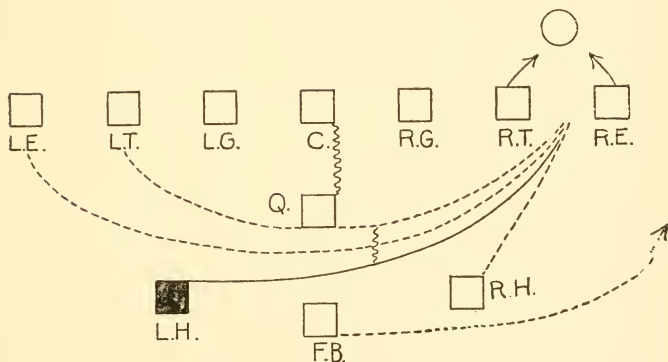
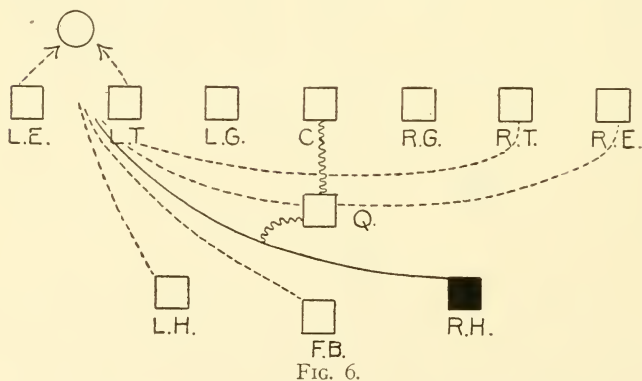


FIG. 5.

In this play your R. T. and R. E. get the opposing tackle out of the way; the R. H. goes straight into the hole, the L. H. carrying the ball next; then the Q. and L. T., who comes around into the play from his position in the line; the L. E. is the last man to follow the play—he makes it safe, watches for fumbles; the F. B. runs straight out from his position and keeps the opposing L. E. from getting the play.

Let the signal be: "Y—A—R—D—S." This is your R. H. through L. T. The L. T. and L. E. make the hole; R. T. and R. E. follow around into the play. Fig. 6 shows this play, which is the same as that in Fig. 5, only on the opposite side of your line.



Let the signal be: "Y—H—A—B—K." This is your R. H. around your L. E., as shown in Fig. 7.

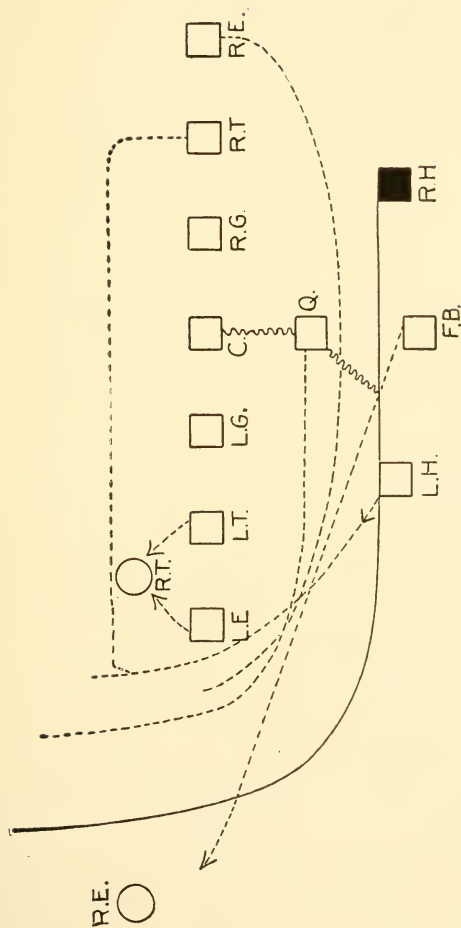


FIG. 7.

Your L. T. and L. E. carry the opposing R. T. back, as they did in Fig. 1; the F. B. keeps the opposing R. E. from the play; the Q. and L. H. precede the R. H. and form his interference; the R. E. comes back of his line, makes the play safe and helps the runner to stay on his feet; the R. T. charges ahead at first, then, passing in front of his line, meets the play on the other side and tries to pull the man carrying the ball free from his tacklers. The signal for the same play on the other side of the line would be: "I—R—S—T—N." Fig 8 shows this play.

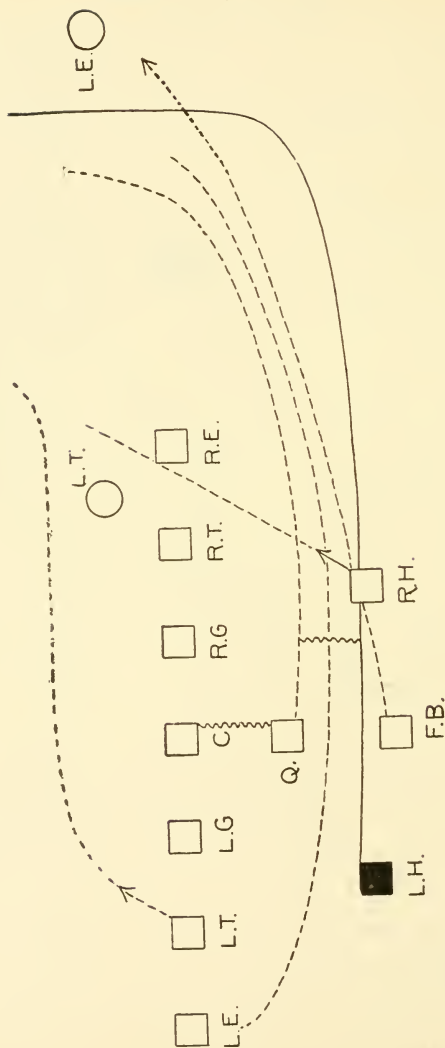


FIG. 8.

In case you wish your R. T. to carry the ball through the opposite tackle the signal will be: "E—A—R—L—Y." This play is shown in Fig. 9.

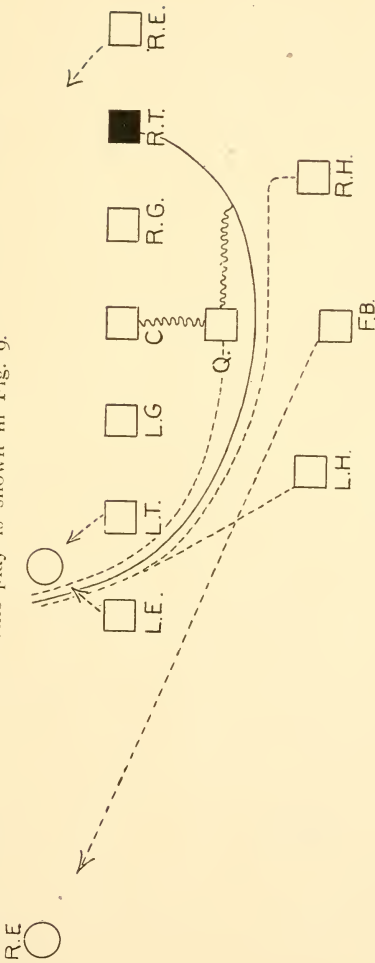
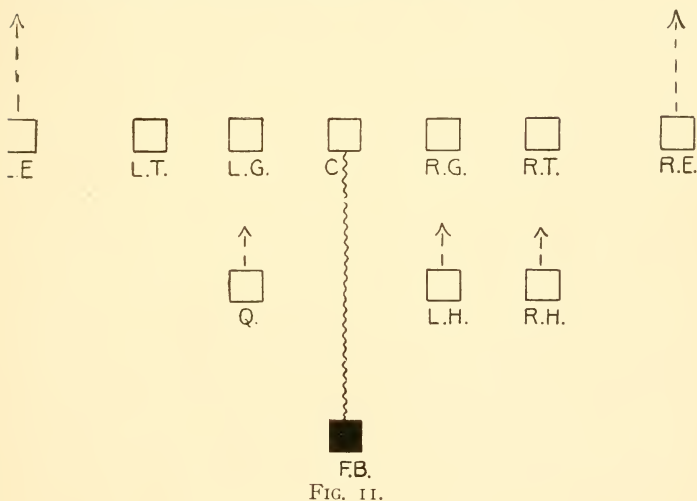


FIG. 9.

In this play your L. E. and L. T. charge the opposing tackle-back; L. H. goes straight into the hole thus made; the Q. helps the R. T. to turn, and should direct him after the ball has been passed to him, so that he will be sure to get into the hole that has been made by the L. E. and L. T.; the R. E. should prevent the opposing L. T. from following your R. T. As soon as the latter leaves the line he should step into his place and keep his opponent from chasing the play around. The F. B. should prevent the R. E. from getting the play, just as he has done in Figs. 7 and 8.

In Code I the signal for a kick could be any letter not in the combination you adopt as your key. Suppose the letter B denotes a kick. Then the full signal for the F. B. to kick the ball would be: "T—B—C—A—O." In Fig. 11 is seen the formation now commonly adopted for a kick.



The two ends get well outside their Tackles and as soon as the ball is snapped, go straight down the field. The L. T. jostles the opposing Tackle and then goes down. The other linemen should hold their opponents long enough to ensure the F. B.'s having time to get the kick off in safety. The Q., L. H. and R. H., leaning forward on their hands, in the positions shown in Fig. 11, protect the F. B. from anyone who may succeed in breaking through the line.

The simple plays have now been given in Code I. These are

the plays which every team must be absolute master of. They may be played in every part of the field and on their success depends to a great extent the success of your team.

The following diagrams illustrate plays intended to puzzle your opponents and which they may not be prepared to meet. However, they should not be practiced until your team has mastered the simple plays. Too often will a team depend for success on tricks and fancy maneuvers, neglecting the steady, straight foot ball that is the hardest to withstand when played properly, only to be doomed to disappointment as a result.

A SIGNAL FOR A WING SHIFT

(USING CODE I.)

The Quarter may call out "Formation A," if the play is to go on the left of centre; "Formation B," if the play is to go on the right. (See Fig. 12.) Then, either the regular signal for an end run or a signal for a quick drive into line following a feint at an end run. (Fig. 13.)

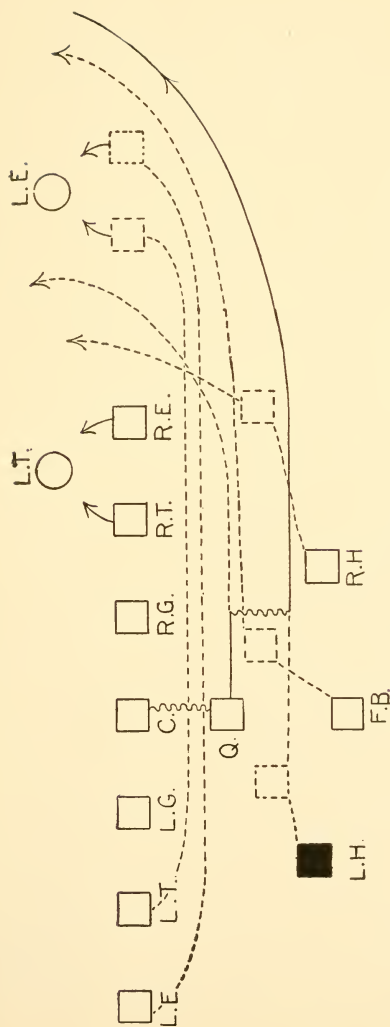


FIG. 12.

This signal might be "Formation B"—"I—R—T—C—K." L. E. and L. T. wheel over against opposing L. E.; at the same time the backs alter their positions, as shown in the figure by dotted squares. L. H. receives ball from Q. as in Fig. 13.

The success of the play depends upon the quickness and speed of the man carrying the ball. Whether successful or not, it will tend to spread out and "open up" the opponent's line. Then signal for the same formation and send the F. B. into the line.

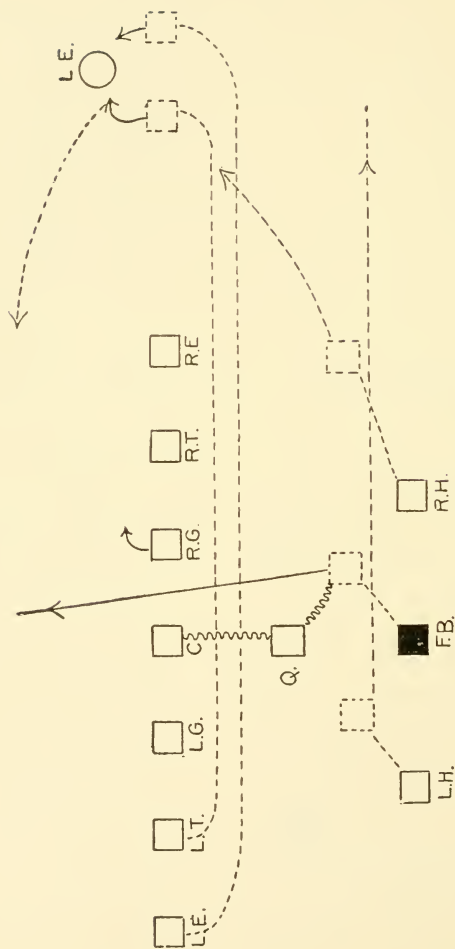


FIG. 13.

This play to be used after having used that in Fig. 12. The R. H. and L. H. start toward the right; Q. pretends to pass to L. H., as in Fig. 12; hides ball; then passes to F. B., who dives between C. and R. G. The signal might be "Formation B"—"T—V—Y—O—K."

The play may be run either to the left or to the right. L. H. receives ball from C., runs wide toward his own right end, passes to F. B., and then goes on to form the interference.

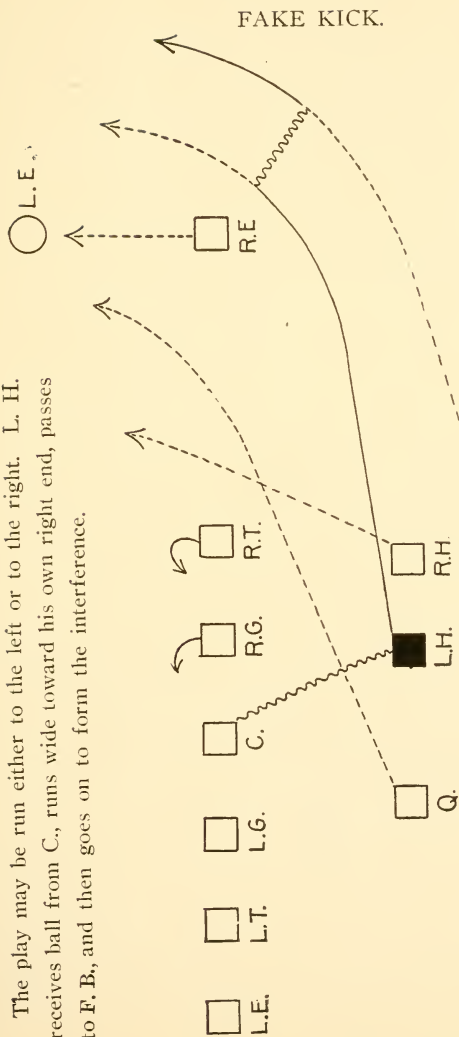


FIG. 14.

The signal might be "K," and it would run: "I-K-E-S-D." The F. B. would drop back as for a kick and take the ball from the L. H. at the point indicated in the diagram.

The following four diagrams show plays that, according to the new rules, can only be used inside the twenty-five yard line. They are called the "Four-men-formation plays." In them the L. T. or R. G. is behind his line.

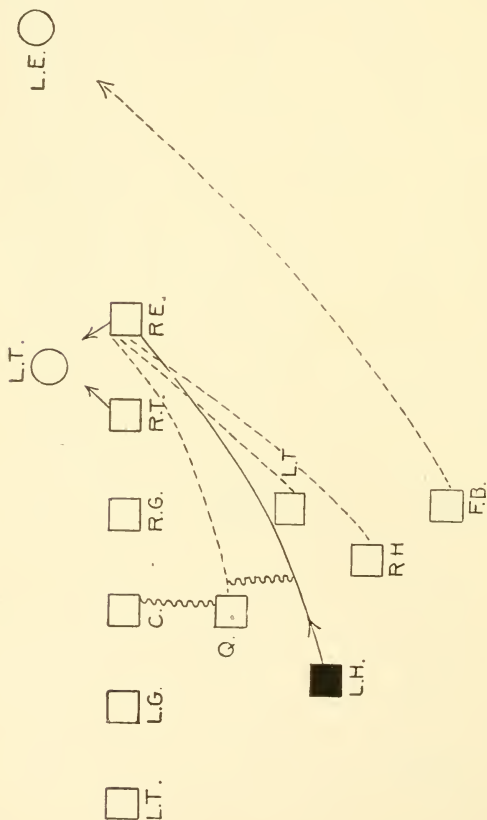


FIG. 15.

Using Code I, the signal might be: "I-E-T-O-C." The L. T. having previously been ordered back, L. T. and R. H. must get off fast. Q. passes to L. H., follows him in, and if L. H. is stopped by the forwards "piling up," tries to swing him loose, F. B. must block opposing end,

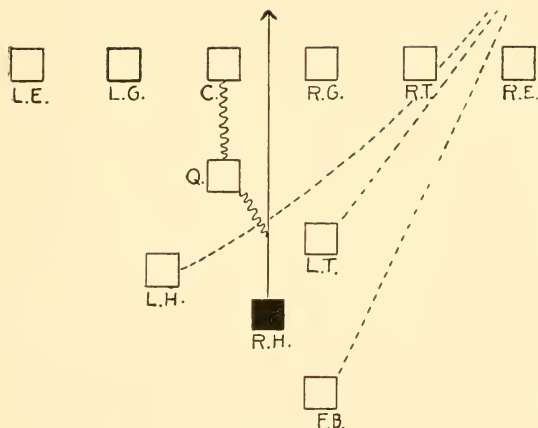


FIG. 16.

Fig. 16.—A delayed pass to R. H. Q. makes feint to pass to L. H., hides ball, then passes to R. H., who dives into the line between C. and R. G. R. H. must be careful not to start too soon. The signal might be: "Left Tackle-back, Y—V—H—C—T."

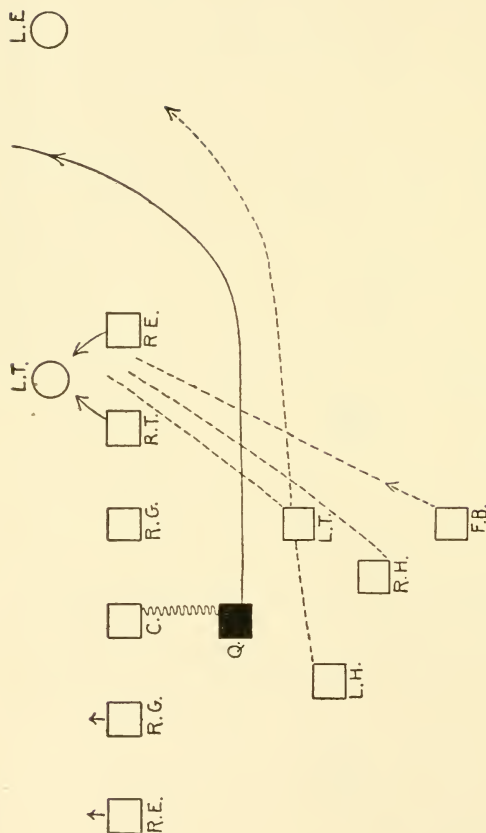


Fig. 17.

Fig. 17.—A delayed quarter-back run, a fake pass to the L. H. for a cross tackle-buck. L. T., R. H., and F. charge on opposing L. T.; L. H. pretends to receive ball (as in Fig. 15); runs behind interference and blocks the opposing L. E. Q. feints to pass ball to L. H.; hides ball; then follows L. H. for a run around the end, using L. H. for interference.

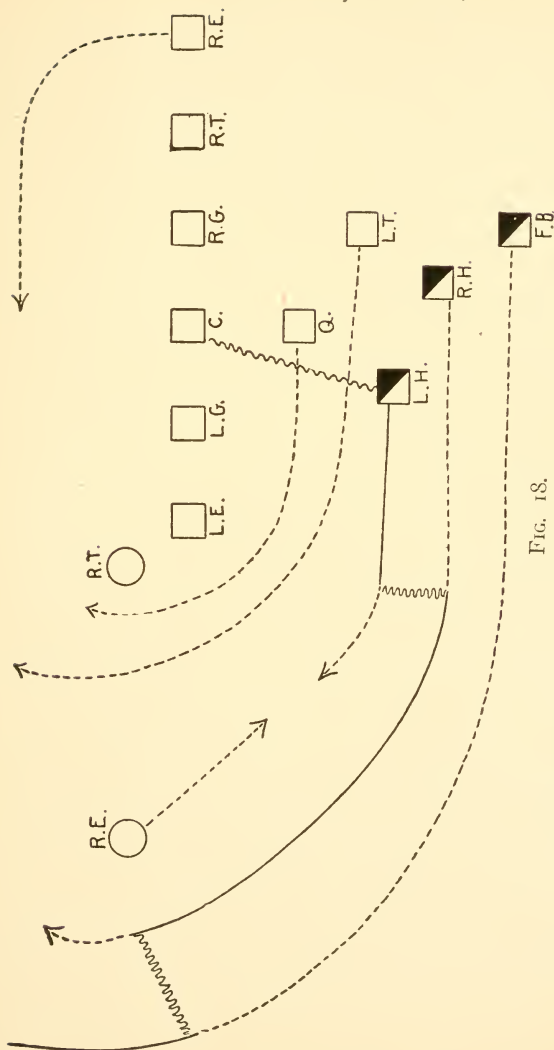


FIG. 18.

Fig. 18.—A double-pass end run around short side of line. L. H. receives ball from centre, passes to R. H., who runs wide around the end; F. runs along with R. H. a little behind him, and receives ball from him about the time the line of scrimmage is crossed. (See figure.) The signal: "Left Tackle-back, I—H—T—O—P."

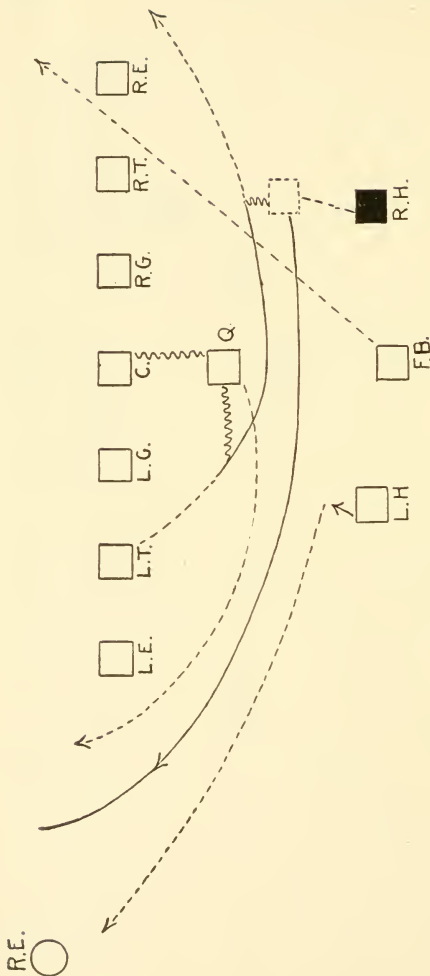


FIG. 19.

Fig. 19.—A fake tackle run and pass to Half-back. To be used anywhere in the field after Fig. 10 has been worked successfully. L. T. does same as in Fig. 10, but passes to R. H., who has stepped forward in order to better conceal the pass from opponents. F. B. charges on opposing L. T., going in front of R. H. L. H. helps L. T. to make his turn, as in Fig. 10, then turns and blocks opposing R. E. Q. passes to L. T. and makes the interference for R. H. The signal would be; "A—Y—H—E—D."

The signals for nineteen plays have now been given according to Code I, a sufficient number of plays for any team. If the Q. at any time thinks it desirable to change the manner of calling the signals, he may readily do so by having the signal start with the second, the third or the fourth letter, or by not having the signal start till he has called some letter agreed on that is not in the key and is not used in the plays.

CODE II.

A COMBINATION OF LETTERS AND NUMBERS.

Let the F. be the hole between guard and centre; H., the hole between tackle and guard; K., the hole just outside tackle; B., end run.

As each letter taken separately stands for the two holes, i. e., F. would mean either the hole between R. G. and C. or L. G. and C., so some method must be adopted to signify which hole is meant. Now, if the signal starts with an odd number, the hole on the left side of centre is meant; if it starts with an even number, the hole on the right side is to be the outlet for the play. For example, the signal "3—B," etc., means an end run around your own left end; and "6—B," etc., means an end run around number to the training table early in the season, but make it your own right end. Therefore "3—B," etc., will always mean an end run around your own left end and the right Half-back will carry the ball. So the completed signal will be: "3—B—4—M." The number 4 and the letter M mean nothing. The complete signal for the Left Half-back to carry the ball around your own right end would be: "4—B—11—X." Since the signal starts with an even number it shows that the play is to go on the right side of centre and the letter B signifies that the play is an end run.

This code contains but the simple ordinary plays used by every team during the first weeks of practice. There are ten plays in all, not, however, including the kick, and are as follows:

L. H. run around R. E. 4—B.
R. H. run around L. E. 3—B

L. H. dive through L. G. and L. T.....	7—H
R. H. dive through R. G. and R. T.....	12—H
L. H. cross-buck just outside R. T.....	14—K.
R. H. cross-buck just outside R. T.....	7—K.
F. B. dive through R. G. and C.....	6—F.
F. B. dive through L. G. and C.....	9—F.
L. T. run just outside R. T.....	2—6—K.
R. T. run just outside R. T.....	3—11—K.

It will be noticed that the L. H., L. T., R. H. and R. T. carry the ball through the same hole (K). Whenever the L. T. is to carry it the signal will start with two even numbers and whenever the R. T. carries the ball with two odd numbers. Thus:

Signal: 4—8—K—5—Y. (See figure 10.)

Signal: 2—K—9—B. (See figure 5.)

Signal: 3—7—K—4—R. (See figure 9.)

Signal: 9—K—2—M. (See figure 6.)

Signal: 4—B—11—X. (See figure 8.)

The absence of letters from signal might indicate a kick; thus: 4—6—7—11. (See figure 11.)

CODE III.

A SYSTEM OF NUMBERS ILLUSTRATED.

In this system it will be seen that the even numbers are plays on the right of centre and the odd numbers are plays on the left.

4. L. G.....	through.....	R. G.
5. R. G.....	through.....	L. G.
6. L. T.....	through.....	R. T.
7. R. T.....	through.....	L. T.
8. L. H.....	around.....	R. E.
9. R. H.....	around.....	L. E.
10. L. H.....	cross-buck through.....	R. T.
11. R. H.....	cross-buck through.....	L. T.
12. R. H.....	straight through.....	R. T.
13. L. H.....	straight through.....	L. T.
14. F. B.....	straight through.....	R. C.

15. F. B.....straight through.....L. C.
 16. L. E.....run around.....R. E.
 17. R. E.....run around.....L. E.

Kick: any number over 300.

Now, let the second number given be the key number, the number which represents the play. For instance:

Signal: 6—8—~~9~~—27—4. (See figure 8.)

Signal: 5—12—21—7. (See figure 2.)

Signal: 8—13—42—9. (See figure 1.)

Signal: 5—15—8—2. (See figure 4.)

Signal: 6—11—43—8. (See figure 6.)

Signal: 357—952. (See figure 11.)

Etc., etc.

In the last two codes the quarter may readily change the key number at any time and so be certain that his signals are unknown to his opponents.

A SEQUENCE OF PLAYS

It frequently happens that a team, especially a school team, will have one man who has clearly outplayed every opponent he has faced and upon whom the quarter may depend when there is a distance that *must* be gained. Under such conditions a team should have a sequence of plays, i. e., three or more plays previously committed to memory, to be executed in quick succession without a signal. Assuming that the tackle is the steady and reliable man, then, select three or more plays through his position and constantly practice them as a series without any intermission.

A sequence of five plays illustrated:

In Code III.—The second number the key:

6—(12)—28—4. (Figure 2.)

5—(6)—21—9. (Figure 10.)

2—(10)—7—5. (Figure 5.)

7—(10)—42—8. (Figure 5.)

8—(11)—29—6. (Figure 6.)

If the first four plays are successful the opponents will nat-

urally shift over, to try and "brace up" the weak spot, and the last play is intended to surprise them and is, therefore, sent on the opposite (left) side of the line.

WHEN TO USE THE SEQUENCE

The best time to employ the sequence is in the opponent's territory about twenty-five yards from the goal, when quickness and speed of plays used is so essential to success. Then, too, it is highly probable that the "cheering" makes it hard to hear the signals.

There are various ways to signal the sequences, but a simple and effective way is to have the quarter make some such remarks as this: "There's only twenty yards to go, fellows; *stay together now!*" This would mean that the next signal was the first of the sequence and that it would be played without any more direction from the quarter-back.

Too much emphasis cannot be laid on how essential to your team's success is a thorough knowledge of the signals. Every player should know just what he is to do in each play; the very instant the signal is given, he should recognize the play and determine to do what is expected of him. The players, apart from the general practice, should repeat the signals to themselves and get familiar with their individual duties in each play. Confidence is almost essential to success in offensive work, and a team can have but little confidence in its ability to advance the ball till every one has thoroughly mastered the signals.

TRAINING FOR FOOT BALL

BY WALTER CAMP.

The days of the extremes of training, both in foot ball and other sports have, at any rate for the time being, gone by. The old-fashioned notion that men must be deprived of everything they wanted for their comfort and go through a period of actual physical suffering has been exploded. Young men, and particularly college men, do not need the severe regimen adopted in the old days, when training was confined only to a certain class and that class one indulging in all sorts of dissipation between times. For this reason treatises on training can be far more brief than in the times when the exact percentage of food stuffs was figured out to a nicety. Moreover, foot ball is one of those fortunate sports which comes at a season of the year when the weather, except in the very early part of it, is not exceedingly hot, but rather bracing, and unless there is something radically wrong with the man, as a rule, during the foot ball season, his appetite should in the main improve.

It is really the nervous tension which has come to be great and it is to the relief of that nervous tension that many of the best friends of the game are looking in hopes that alterations in the rules may improve this condition.

The great majority of the players are not affected by this, but the captain, coach and quarter-back usually pass through periods where the worry is quite extreme, and while it makes little difference to the coach it does affect the captain and quarter-back very materially and with these men, the greatest problem of the training season is to see that they pay less rather than more attention to the sport and get some relaxation at periods.

The general physical condition of the men is in these days looked after both by the trainer and by competent surgeons, so far as injuries are concerned.

The problem of how much work a man should do and when he should work is one of general consultation between coach, trainer and captain—the trainer's opinion being in the main accepted as final—and as a rule this trio make satisfactory decisions. Sometimes a man is found who is able to deceive all three as to his condition, but not often, and, moreover, such men are usually men whose personal idiosyncrasies are known.

One of the most difficult points in training a foot ball team is to keep them steadily progressing and not have a slump at some disastrous period during the season. Men differ so greatly individually that the accepted method of working the men nowadays is to watch these peculiarities and not try to judge all men by the same rule, but to lay off first one and then another as occasion demands, giving them all an opportunity for sufficient practice, but forcing no man to work too long.

It takes a good deal of time to teach a man modern foot ball and he has to go through a certain period of steady work before he combines the necessary knowledge with the skill; hence an especial reason for consistency in carrying out training development. Foot ball men all need quickness and the work should be devoted to short periods of snappy play rather than long periods which get the man into the bad habit of playing slowly because he is tired.

A foot ball player beyond all else needs to have a sort of superfluous energy to draw upon at the time of his match and to exhaust this is to make a very serious mistake. The men should, therefore, be very carefully watched in order to see that the work is not at the expense of this energy, which must be called upon at a critical time. No man should find himself in a game without a feeling that he would at least like to make a touchdown whether it is possible or not, and the making of touchdowns is practically impossible if the man's physical and mental condition is such as to leave him without desire to do so.

The first problem in the season that faces captain, coaches and trainers is that of making selection from a great mass of material. This material will be scattered over three or four different

fields and in all sorts of physical condition, as some men take care of themselves during the summer while others do not. A coach may easily be deceived by lack of condition in a man who, when in shape, would play a strong game. For this reason critical watching and very likely some inquiry as to the past performance of the man is very advisable. As soon as the material has begun to be sifted it becomes necessary to sort out a part of it for the University, but it is wise not to take a great reward of merit in a way, at the same time taking possibly the absolutely sure men who are not likely to have the best of living otherwise.

All this matter is a question of judgment and a little study and reflection on the subject is returned many times over in the results later in the season. It is hardly worth while, although I know it has been adopted by some trainers, to put men who are going to play foot ball through special courses of gymnastics, unless it may be for some special weakness of the individual. It is certainly a good plan for foot ball men to be handled by a track trainer in learning to start quickly. Gymnasium apparatus, however, is not proving very successful for general teams. A little setting up work in the early part of the season is often a good thing and some running, but after the season is once under way the men have plenty to do without taking these special exercises, except it may be to reduce the weight of a man who is very heavy. Running around the field for men who are temporarily laid off, and for the whole squad in the early part of the season, is a good thing.

Another great problem is to keep enough backs to last through the season. The backs are usually lighter than the forwards and being given a good deal more of the running work to do (and this will be particularly true under the new rules where the men behind the line will have to do a good deal of this work between the two twenty-five yard lines) is rather apt to call for all the material that a coach and trainer can keep going. And even then at the end of the season the good men are scarce. The first part of the season the practice ought to be very short—

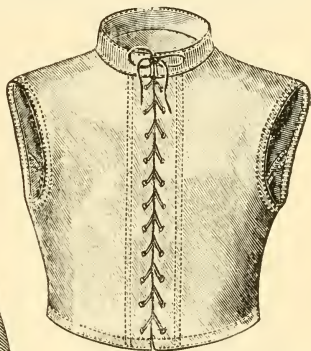
four or five minutes—and the team worked up to longer periods as the weather grows cooler and they improve in condition. By mid-season they should be able to play two fifteen-minute halves with ease, and if possible a fifteen and a twenty-minute half. By November they should be able to stand a slightly longer period in order that by the time of the big games they may be able to go the necessary two thirty-five minute halves.

As to protectors for the players, it is well worth while to use such protectors as are likely to save the players from injury, but of late it is feared too much has been done in this way so that the players were rendered rather less plucky, and, moreover, in some instances were probably made tender. Under the rules of 1903 the doing away with the heavy head protectors will be a great step in advance and will probably save many injuries. Nose guards are rather difficult to breathe through, but properly arranged are not dangerous. Protectors for the thigh and shins are good things and if a man receives an injured shoulder some kind of protection there is also advisable.

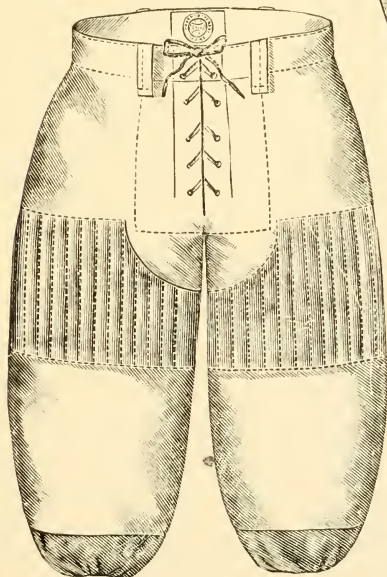
So far as foot ball is concerned a strict diet is not essential, but the men should not be permitted to smoke, nor should they be given alcoholic drinks except for medicinal purposes or when a man is very tired. The living should be plain and substantial and every effort made to have his training table attractive and the food appetizing.

HOW TO EQUIP A FOOT BALL TEAM

The most essential point in starting a foot ball team is to have every player properly clothed, and following is a list of the principal articles worn by the leading university and college teams throughout the country :



Spalding's Foot Ball Jackets are made of a special brown canvas, sewed with the best and strongest linen, and hand-made eyelets. Those with sleeves cost 75 cents; without sleeves, 60 cents.



No. OOR.

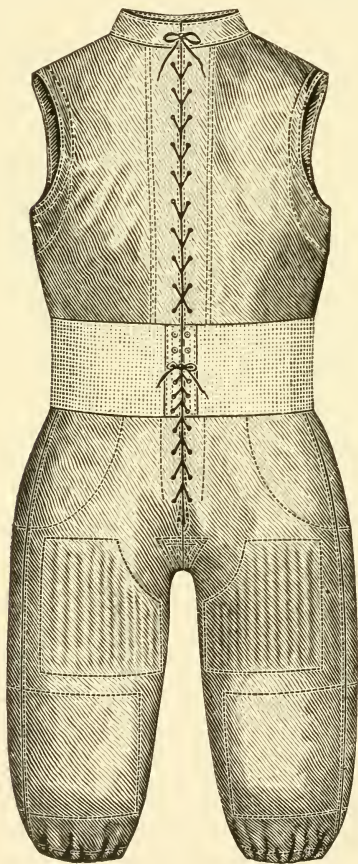
Proper pants to be worn are the No. OOR, which are made of imported moleskin, very light weight, padded hips and knees, with reeds on the thighs, thus preventing injury to the hips and knees and doing away with injuries to thighs so often called "charlie horse." Price of these is

\$4.50 per pair. A good light weight pair, No. OMR, is made of moleskin, padded hips and knees, with reeds, same as No. OOR, and retail for \$3.00. The canvas pants, No. 1P, are made of special

brown canvas, well padded throughout, and sell for \$1.50, while a cheaper style of brown canvas, No. 2P, cost \$1.00 per pair. No. XP, made of heavy white drill, well padded, can be bought for 75 cents.

The accompanying cut illustrates Spalding's 'Varsity Union suit. This consists of their special 'Varsity foot ball jacket and pants connected by a substantial elastic belt. The price of this complete is \$5.00. The jacket and pants can be bought separately, however; the jacket (sleeveless) 90 cents and the pants, \$2.00. These suits are made scientifically correct, of the lightest and strongest brown canvas, specially manufactured for these goods. The hips and knees are properly padded and the thighs have cane strips.

Sweaters are a needed adjunct of every foot ball player's outfit. Spalding's No. A Intercollegiate Sweater, which is the official sweater worn by all the leading university and college teams, is made of pure Australian lambs' wool and

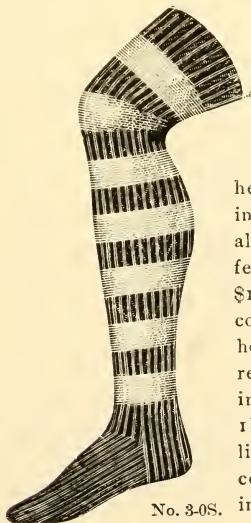


has been found indispensable as a preventative for taking cold. It retails for \$6.00. The No. B heavy weight sweater retails for \$5.00, and the No. C, standard weight, for \$4.00.

In jerseys, a very popular garment worn with sleeveless jackets is Spalding's No. 10PX, which is manufactured from hard twisted worsted of good quality and closely woven. It is made with a solid color body with alternate striped sleeves—usually two inches of same color as



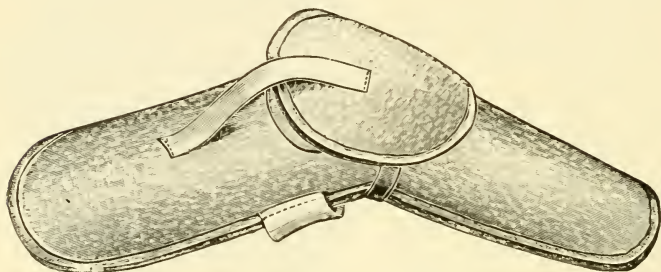
body with narrow stripes of any desired color. It costs \$2.75. The same grade in solid, plain colors, costs \$2.50. Full striped jerseys in a large variety of colors—Spalding's No. 10PS is a popular style—cost \$3.00 each.



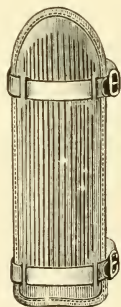
No. 3-0S.

The No. 3-0S stockings are made of heavy ribbed wool especially woven for playing this game. They come in a variety of alternate colors to suit the colors of the different teams. These stockings retail for \$1.75 per pair. The same grade in plain colors cost \$1.50. The No. 1RS stockings, heavy weight, also have alternate colors and retail for \$1.35 per pair; the medium weight in same grade retails for \$1.10. The Nos. 1R, 2R and 3R come in heavy, medium and lighter weight, and sell for \$1.00, 80 and 60 cents respectively. A pair of cotton stockings, No. 4R, can be bought for 25 cents.

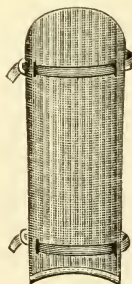
Something that practically every prominent player will use this season is the Spalding Combined Leg, Knee and Shin Guard. It is made after a model submitted by Coach Warner of the Carlisle



Indians and is bound to give perfect protection with absolute freedom of movements. It is heavily covered with wool felt and is made in exact accordance with decisions of the Rules Committee.



No. 30.



Canvas

Shin guards are a very necessary portion of a foot ball player's outfit. Spalding's No. 30 style, shown herewith, are made of heavy sole leather, corrugated, and molded to shape, but flexible so that they will conform to any size leg. The price is \$1.50. Canvas shin guards can be bought for 40, 50 and 90 cents.

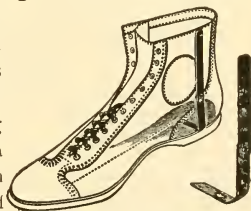


Spalding's No. A2-2.

Shoe, which retails for \$4.50. In this latter grade they also have a shoe called the Sprinting Shoe (No. A2S), which is worn by the "ends" and often by the "backs," it being a light weight shoe, and retails for \$4.50, the same price as the No. A-2 shoe. The No. A-3 Amateur Special Shoe is made of black leather, and retails for \$3.50.

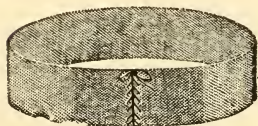
All of Spalding's shoes this year are fitted with their new style cleats, which have been used with great success by leading players. In fact, all of their orders from the leading college teams insist on the new style cleats.

The Murphy Ankle Brace mentioned in a preceding paragraph on foot ball shoes is a contrivance designed by M. C. Murphy, the famous Yale trainer, to prevent turning of the ankle. It does not interfere with the free action of the latter, and although adding nothing materially to the weight of the shoe, is strong enough to properly pro-



Murphy Ankle Brace.

tect the ankle against serious injury, and can be attached by any shoemaker. The price is 50 cents.



The elastic belt as shown herewith stretches with length of body and may be attached to jacket and pants, thus

forming one continuous suit. By closely fitting the body, the opposing player has less chance of tackling. It allows perfect freedom in all positions. The price is \$2.00 each.

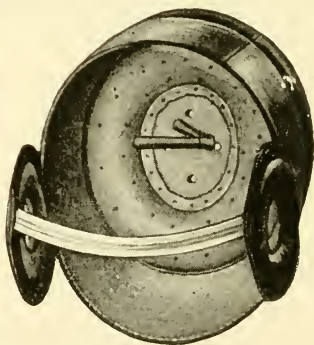
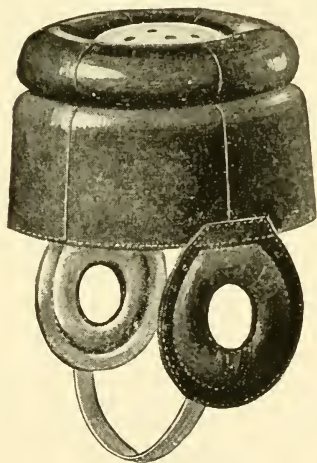


No. 728.

A good belt to wear is No. 728, russet or black, which retails for 50 cents. A

cheaper quality can be bought for 25 cents.

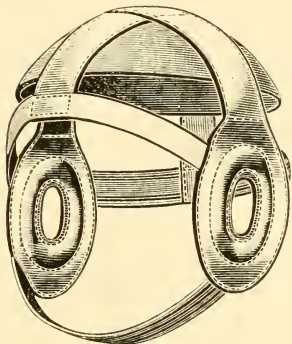
In the matter of head harness there is quite a variety to select from. The best is undoubtedly Spalding's No. 70, which sells for \$5.00. It is made of soft black leather, with an inflated crown. The



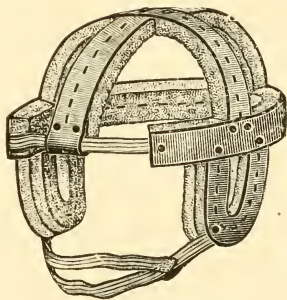
Interior view of No. 70
Pneumatic Head Harness.

pneumatic part of the head harness is sufficient to give ample protection with space left for ventilation through heavy wool felt. In every particular it is made in accordance with official rules. Spalding's head harness No. 30 was designed by H. B. Conibear, trainer at the University of Chicago. The crown is made of soft leather, well padded, the ear pieces are padded and the harness complete gives ample protection to all parts. The price of the No. 30 is \$3.00. Spalding's No. 35 Head Harness is made of black leather and thoroughly padded with wool half an inch thick, with an elastic to

go under the chin, and is adjustable to any size head. It is a thorough protection to the crown and back of the head and also to the ears. This sells for \$2.50.

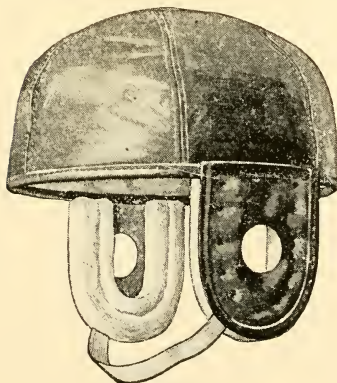


No. 30 Head Harness.

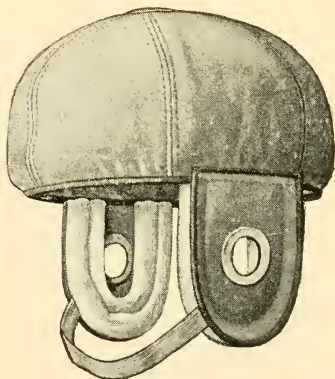


No. 35 Head Harness.

This season there has been added to the line two styles of "Gray" Head Harness: No. 45, which is made of soft black leather, well padded, sells for \$2.00; No. 55, which is the same, but made of brown canvas, sells for \$1.25. Both are made in accordance with decisions of the Rules Committee.

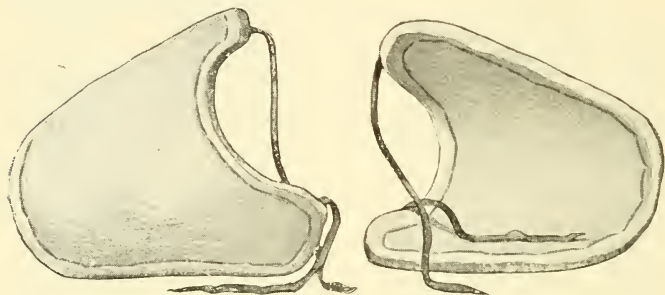


No. 45 Head Harness.

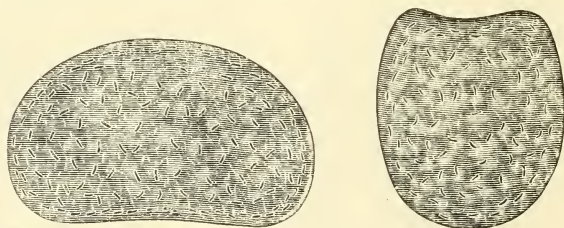


No. 55 Head Harness.

Something new in shoulder guards is shown this year in Spalding's improved leather pads for the shoulders. They are covered with heavy wool felt and molded to form. Highly endorsed by prominent players and trainers and made after design submitted by Coach Warner of the Carlisle Indians.



Players in buying pads to be attached to their jerseys are advised to get Spalding's leather covered pads, which can be attached to any part of a jersey, but are especially adapted for the shoulders and elbows. They are covered with tan leather, lined with heavy drilling and filled with pure curled hair. These pads, for either the shoulder or elbow, cost 50 cents for each one. The same, but covered with brown canvas instead of leather, cost 25 cents each.



Spalding's Mouthpiece.

Spalding's rubber mouthpiece is made of best quality Para rubber. It gives perfect protection to the mouth and teeth, and sells for 25 cents.



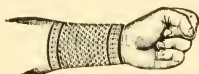
Morril Nose Guard.

The Morrill Nose Guard is made of the finest rubber that can be procured, and no metal or wire is used in its construction; it is the only nose guard which to-day meets all the requirements of the game. It also protects the teeth as well as the nose and re-tails for \$1.50.

Foot ball players often have need of a good bandage, either for the wrist, knee, elbow or shoulder, and for their guidance we illustrate



a few of the most popular kinds. The shoulder cap bandage is made in both cotton and silk thread, the former retailing for \$4.00 and the latter for \$5.50. The knee, elbow and ankle bandages are also made in cotton and silk thread, and sell for \$1.50 for cotton and \$2.00 for silk thread.



The wrist bandages cost 75 cents for cotton and \$1.00 for silk.



A bandage that is often used is one composed of threads of rubber completely covered. It is light, porous, and easily applied. The

pressure can be applied wherever necessary, following all depressions or swellings with folding and unvarying uniformity. One of these $2\frac{1}{2}$ inches wide and 5 yards long (stretched) costs 75 cents, while one of the same length, 3 inches wide, costs \$1.00.



Spalding's Combination Foot Ball Glove and Wrist Supporter is something new in this line. It is the invention of H. B. Conibear, trainer at the University of Chicago. The back of the hand is protected by a piece of



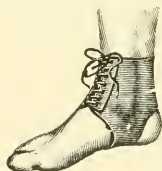
sole leather, and any strain to the wrist is avoided by the leather strap supporter which forms the upper part of the glove. It is made for either hand and costs \$1 00.



For those who do not wish such an elaborate wrist supporter as the above, there are leather wrist supporters made in tan or black leather, those with a single buckle costing 25 cents and those with a double strap and buckle costing 35 cents. Those with lacings, as shown above, in tan or black, cost 25 cents.



The Hackey Patent Ankle Support is highly recommended by all the coaches as the best of its kind, and



prevents many injuries to the ankles. It relieves pain immediately and cures a sprain in a remarkably short time. The price is \$1 00 per pair for the best. Cheaper styles at 50 and 25 cents.

The No. 5 "Bike" Supporter has been conceded by all as the only jockey strap suspensory. It is clean, comfortable and porous, and is made in three sizes. The price is 75 cents.



No. 5.



The Spalding.

Two other well known suspensories are the Spalding, which sells from 25 cents to \$1 25, according to material used, and the Old Point Comfort, at \$1.00 to \$1.50, depending on the material also.



O. P. C.

Spalding's elastic supporters are used a great deal, and are a most necessary part of the equipment. They are made in several styles, and cost 25 and 50 cents each, depending upon material used.



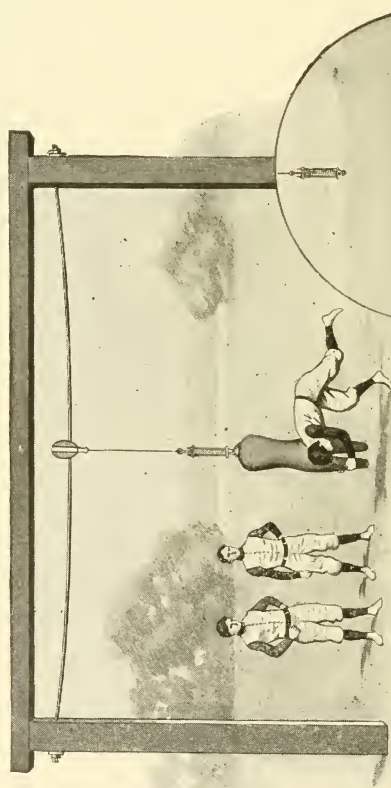
The cut shown herewith illustrates a desirable accompaniment to the foregoing supporters. It is called a lower abdomen protector, and is made of heavy wire, well padded and covered with chamois. It costs \$1.50.



The Spalding Official Intercollegiate No. J 5 foot ball needs no comment, and is known throughout the country as the only "official" ball. It is used by all the universities and colleges throughout the United States. It should always be used in practice as well as in regular games, as

the players can thus accustom themselves to its "feel." It retails for \$4.00. There should always be a few extra balls on hand.

In conclusion, we would advise every boy who wishes to excel at foot ball to get a copy of this year's issue of Spalding's Official Foot Ball Guide (Spalding's Athletic Library No. 181), which contains the newly revised rules as recommended by the Rules Committee, for without a thorough knowledge of the rules no boy can expect to become a good player. The Guide also contains many article of interest to every lover of foot ball, reviews of the work of leading teams, All-America team for 1902, records of leading clubs, and pictures of nearly 3,000 players from all over the United States and Canada. Spalding's Official Foot Ball Guide can be obtained from any news-dealer or will be sent to any address in the United States or Canada upon receipt of ten cents by the American Sports Publishing Company, 16 and 18 Park Place, New York.



PLAYER TACKLING DUMMY

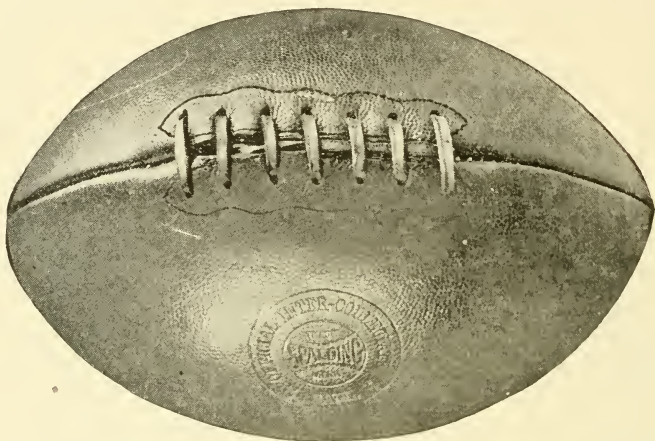
SPALDING'S FOOT BALL TACKLING MACHINE AND RELEASING ATTACHMENT

PLAYER HAS TACKLED AND THROWN DUMMY

HOW TO TACKLE PROPERLY

One of the most essential things in the game of foot ball is that the player should know how to tackle properly, thereby preventing injuries and making himself one of the most valuable men on the team. This can only be acquired by practice, and the Spalding Tackling Machine with the McMaster improvement has been accepted as the only true method of teaching the players how to tackle. The tackling machine has been in use for several years and is almost indispensable for the training and coaching of the team. The new tackling improvement was invented by Mr. John McMaster, trainer of the Harvard team, and is used by that team, Yale and all the large universities and colleges.

The price of the tackling machine complete is \$40.00. This includes dummy, steel cross rod, new releasing attachment, and block and rope for attaching same ; in fact, everything necessary except uprights and cross beam, which can be obtained at any saw mill. The price of the new attachment on the foot ball tackling machine, separate, is \$10.00. On application a blue print and drawing of the tackling machine with full description as to how to put same up will be forwarded free of charge to any address by the makers, A. G. Spalding & Bros., from any of their stores in New York, Chicago, Denver, Baltimore, Buffalo, Philadelphia, Boston, St. Louis, Kansas City, Minneapolis, San Francisco and Montreal, Canada.



It is amusing to note the "Official" Foot Balls advertised by our competitors. ❁ ❁ There is only one Official Foot Ball used by all the colleges, and that is the Intercollegiate No. J5 Foot Ball, manufactured by A. G. Spalding & Bros.

A. G. SPALDING & BROS.

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Denver

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Boston
Minneapolis

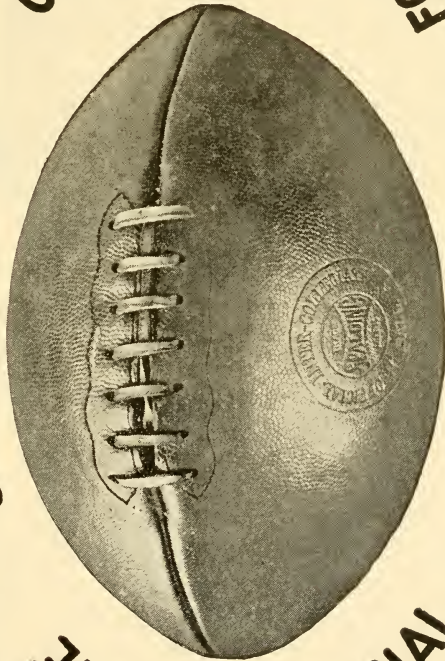
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ONLY

FOOT BALL



THE

OFFICIAL

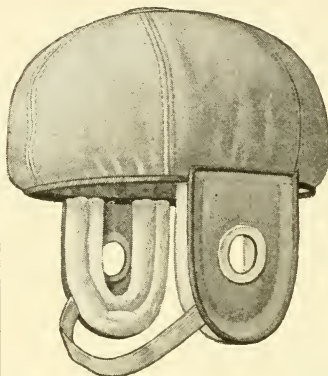
Spalding's Intercollegiate

Foot Ball

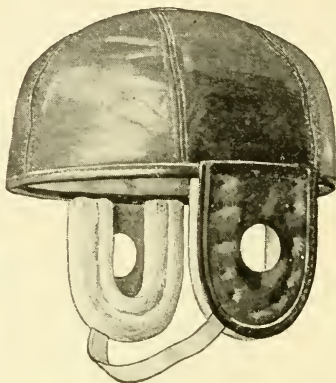
No. J5. Complete \$4.00

We have spared no expense in making this ball perfect in every detail, and offer it as the finest foot ball ever produced. Each ball is thoroughly tested, packed in a separate box and sealed, so that our customers are guaranteed a perfect ball inside when same is received with seal unbroken. A polished and nickel-plated brass foot ball inflater and lacing needle will be packed with each Intercollegiate foot ball without extra charge. Used exclusively by all the leading universities, colleges and athletic associations without exception.

The "Gray" Head Harness



No. 55



No. 45

Made of soft black leather, well padded. Designed in accordance with decision of the Rules Committee of the Intercollegiate Association, and approved by prominent players and trainers. In ordering give size of hat worn.

No. 45. Each, **\$2.00**

Same as above but made of special quality brown canvas, nicely padded.

No. 55. Each, **\$1.25**

Send for Spalding's handsomely illustrated catalogue.
Mailed free to any address.

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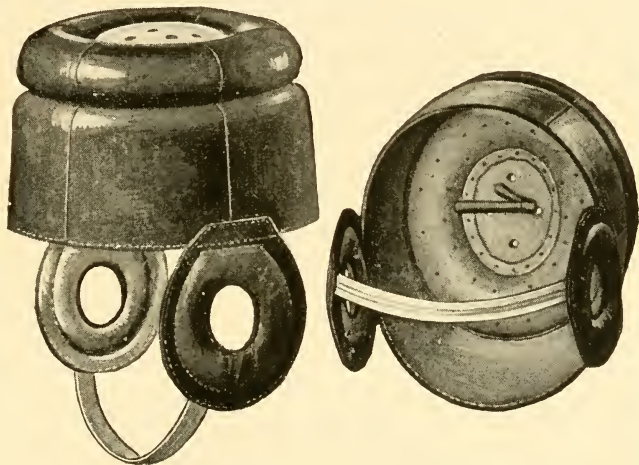
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Spalding's Pneumatic Head Harness

PATENTED



This represents really one of the greatest improvements that has so far been invented in the way of equipment for foot ball. It is made of soft black leather with an inflated crown. The pneumatic part of the head harness is sufficient to give ample protection with space left for ventilation through heavy wool felt. In every particular it is made in accordance with the official rules. Heartily endorsed by prominent players and trainers who have examined it thoroughly. When ordering specify size of hat worn.

No. 70. Each, \$5.00

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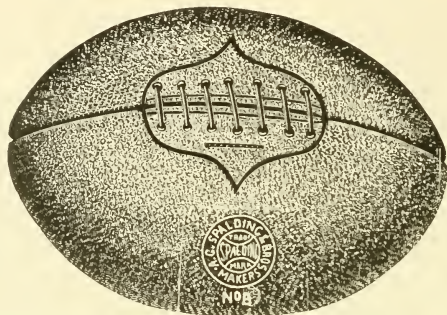
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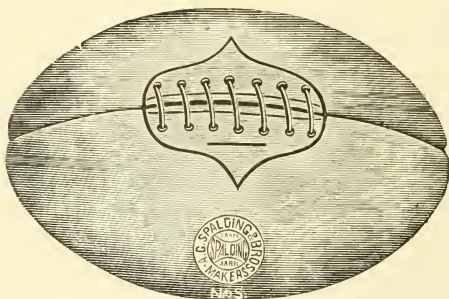
RUGBY FOOT BALL



Selected fine grain leather case. Well made and will give excellent satisfaction. Each ball packed complete in sealed box with bladder and rawhide lace.

No. B. Regulation size. Each, \$2.00

RUGBY FOOT BALL



Good quality leather case, pebble graining.. Each ball packed complete with bladder in sealed box; brass eyelets for lacing and substantially made throughout.

No. S. Regulation size. Each, \$1.25

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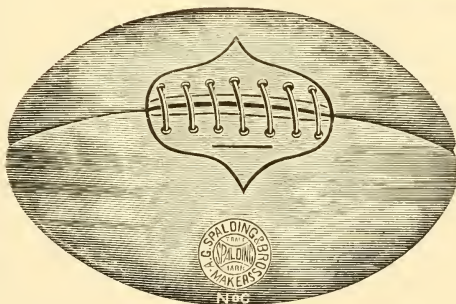
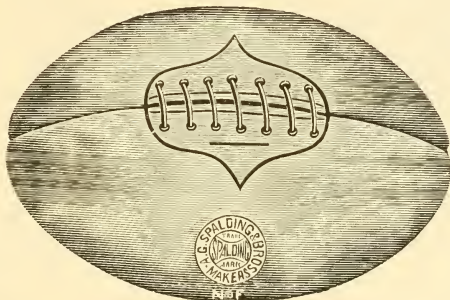
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Rugby Foot Balls

Handsomely grained cowhide case of excellent quality. Each ball packed complete with bladder and rawhide lace in sealed box.

No. F.
Regulation Size
Each, \$1.50



Well made leather case, pebble graining; standard trademark quality. Each ball packed complete with bladder in sealed box.

No. C
Regulation Size
Each, \$1.00

Handsomely illustrated catalogue mailed free to any address.

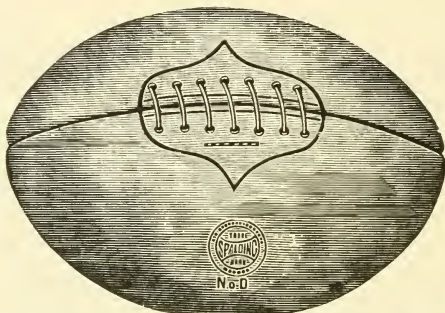
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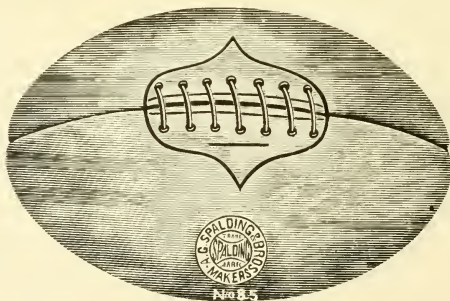


Rugby Foot Ball

Trade-Mark quality; leather case, pebbled graining. Each ball complete with bladder in separate box and sealed.

No. D. Regulation size. Each, \$1.00

Rugby Foot Ball



Leather case, trade-mark quality. Each ball complete with bladder in separate box and sealed.

No. 25. Regulation size. Each, 75c.

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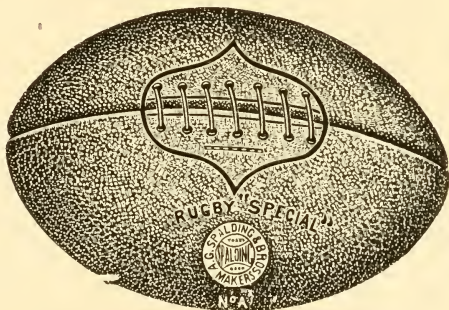
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...The Spalding...

Rugby "Special" Foot Ball



A SUBSTANTIAL ball in every detail. Made of specially tanned imported grain leather and put together in a most thorough manner. Superior in style and quality to the many balls put on the market in imitation of our Official No. J5 Ball. Each ball put up in a sealed box with bladder and rawhide lace.

Fully guaranteed.

No. A. Rugby "Special" Foot Ball. Each, \$2.50

Handsomely illustrated catalogue mailed free to any address.

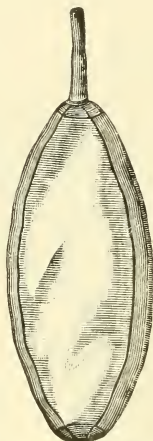
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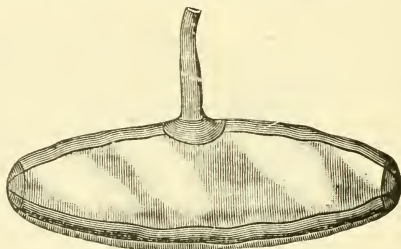
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Guaranteed Foot Ball Bladders



No. OA.	For No. L Ball	Each, 75c.
No. OB.	For No. K Ball	" 75c.
No. OR.	For Nos. J5 and A Balls	.	.	.	.	.	" 75c.
No. AP.	For Nos. O and N Balls	.	.	.	.	.	" 60c.
No. P.	For No. B Ball	.	.	.	.	.	" 50c.
No. R.	For Nos. C, D and S Balls	.	.	.	.	.	" 50c.

Guarantee on Bladders

We guarantee absolutely the bladders used in all foot balls catalogued except No. 25 and No. F, and will replace them within reasonable time if defective. *A puncture within two inches of the stem indicates carelessness in lacing, and bladders so punctured will not be replaced.*

This Guarantee applies only during the season in which ball is purchased.

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The Spalding "Official" Association Ball



The case of our No. L Ball is constructed in eight sections with capless ends, neat in appearance and very serviceable. Material and workmanship are of highest quality and fully guaranteed. Each ball is packed complete in sealed box, with pure Para rubber guaranteed bladder, foot ball inflater, rawhide lace and lacing needle. Contents guaranteed if seal is unbroken.

No. L. "Official" Association Foot Ball, \$5.00

Send for Spalding's handsomely illustrated catalogue.
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The Spalding "Official" Gaelic Ball



The material and workmanship are of the highest quality and fully guaranteed. Each ball is packed complete with a pure Para rubber guaranteed bladder, a foot ball inflater, rawhide lace and a lacing needle in sealed box, and contents guaranteed perfect if seal is unbroken.

No. K. "Official" Gaelic Foot Ball, \$5.00

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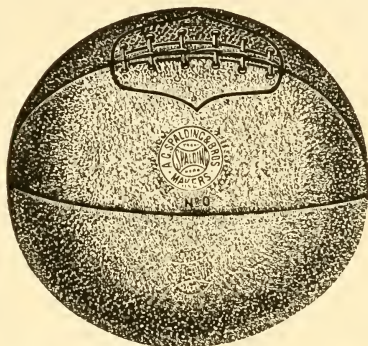
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Association Foot Balls

Trade-Mark Quality

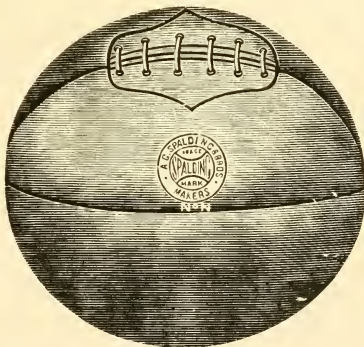


Our No. O Ball is extremely well made and will give excellent satisfaction. The case is made of best grade English grain leather and the bladder of pure Para rubber fully guaranteed. Each ball packed complete with rawhide lace in sealed box.

**No. O. Regulation Size
Each, \$3.00**

The case of this ball is well made of good quality leather, pebbled graining. Packed complete with bladder in sealed box.

**No. N. Regulation Size
Each, \$1.50**



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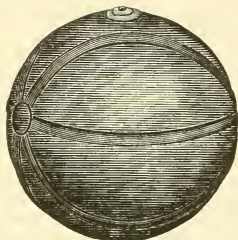
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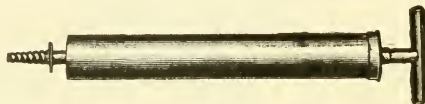


AMERICAN Rubber Foot Balls

Made of black rubber fabric, strong and durable. Brass key for inflating furnished with each ball.

No. 1.	20 inches circumference	-	-	-	-	-	-	-	-	Each, 40c.
No. 2.	22 " "	-	-	-	-	-	-	-	-	50c.
No. 3.	24 " "	-	-	-	-	-	-	-	-	55c.
No. 4.	26 " "	-	-	-	-	-	-	-	-	65c.
No. 5.	28 " "	-	-	-	-	-	-	-	-	75c.
No. 6.	30 " "	-	-	-	-	-	-	-	-	85c.
Extra keys for foot balls		-	-	-	-	-	-	-	-	5c.
Extra valve parts for foot balls		-	-	-	-	-	-	-	-	5c.

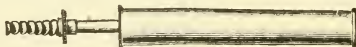
"Club" Foot Ball Inflater



Made of polished brass. Extreme length closed, $13\frac{1}{2}$ inches; cylinder 10 inches long and diameter $1\frac{1}{2}$ inch.

No. 2. Club Brass Inflater. Each, 50c.

Pocket Foot Ball Inflater



Made of aluminum, convenient in size and quick in action. The cylinder is $5\frac{1}{2}$ inches long, and diameter $\frac{7}{8}$ inch; extreme length closed, $7\frac{1}{4}$ inches.

No. 3. Brass Inflater. Each, 25c.

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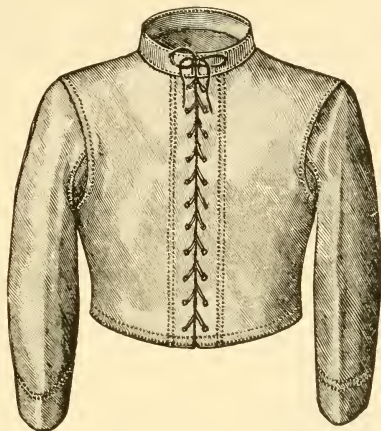
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Nos. 1 and X

No. 1. Each, 75c.

Jackets same as our No. 1, but without sleeves.

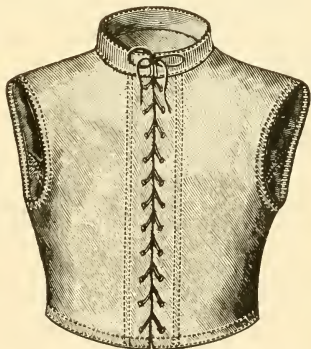
No. 1S. Each, 60c.

Foot Ball Jackets, with sleeves. Good quality white canvas, well made.

No. X. Each, 50c.

Foot Ball Jackets, sleeveless, otherwise same as No. X.

No. XS. Each, 40c.



Nos. 1S and XS

Foot Ball Jackets

Jacket, with sleeves ; extra quality, made of special brown canvas, sewed with the best and strongest linen, handmade eyelets for lacing.

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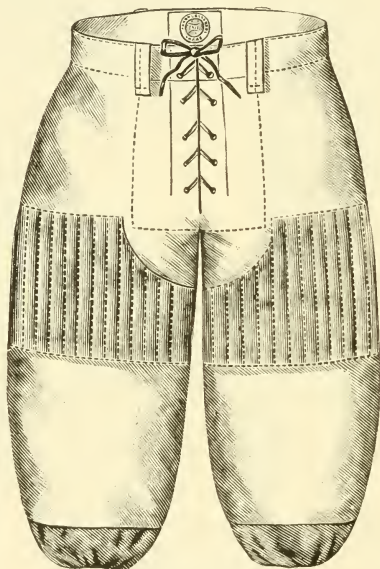
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FOOT BALL PANTS

✂ MOLESKIN ✂



Intercollegiate Foot Ball Pants, lace front, made of the finest and most serviceable drab moleskin, manufactured expressly for the purpose. The hips and knees are padded according to the latest improved method with fine curled hair, and the thighs with cane strips.

Nos. OOR and OMR

No. **OOR.** Per pair, **\$4.50**

No. **OMR.** Made in same style as our OOR, but of a cheaper grade of moleskin. Per pair, **\$3.00**

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FOOT BALL PANTS

✧ CANVAS ✧

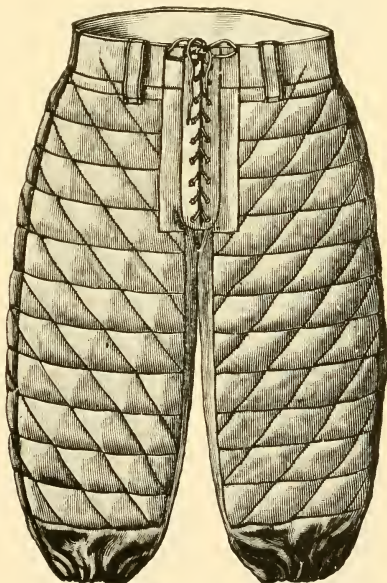
No. 1P. Good quality
brown canvas, well
padded throughout.
Per pair, . \$1.50



No. 2P. Extra quality
brown canvas, well
padded and substan-
tially made. \$1.00



No. XP. Made of
heavy white drill
and well padded.
Per pair, . 75c.



Nos. 1P, 2P and XP

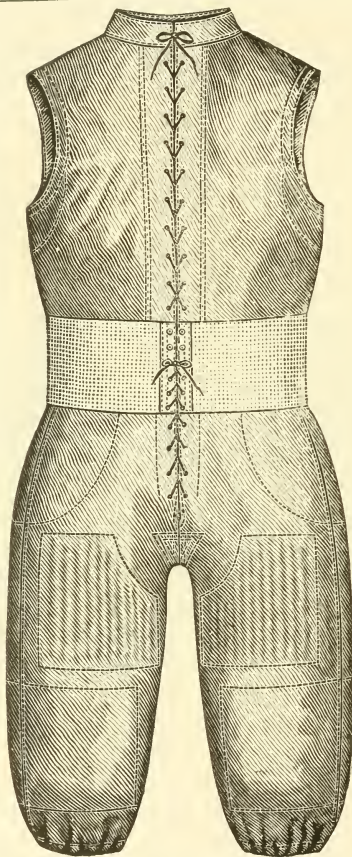
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No. VTJ

SPALDING'S Special 'Varsity Foot Ball Clothing

We have supplied many of the best players with these pants and jackets during the past two seasons with results highly satisfactory. Both are made scientifically correct, and the material is the lightest and softest brown canvas, specially manufactured for us. Hips and knees are properly padded according to our improved method, and the thighs have cane strips. Absolutely best grade in every particular.

'Varsity Foot Ball Trousers

No. VT. Pair, \$2.00

'Varsity Foot Ball Jackets,
sleeveless

No. VJ. Each, 90c.

SPALDING'S 'VARSITY UNION SUIT

Made up of our 'Varsity Pants and Jacket, connected by a substantial elastic belt. This suit will give excellent satisfaction. It conforms to each movement of the body and makes an ideal outfit in every way.

'Varsity Union Foot Ball
Suit

No. VTJ. Price, \$5.00

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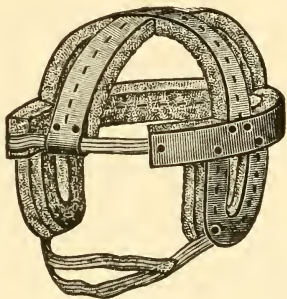
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Spalding's Head Harness

This style head harness is the lightest and most comfortable to wear of any head guard yet devised. It is made of black leather and thoroughly padded with wool felt a half inch thick, with an elastic to go under the chin, and is adjustable to any size head. It is a thorough protection to the crown and back of the head, also to the ears.

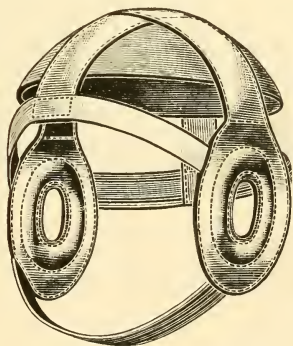


Patented

No. 35. Each, **\$2.50**

Spalding's Head Harness No. 30

Designed by H. B. Conibear, trainer, University of Chicago. The crown piece is made of soft leather, well padded. The ear pieces are nicely padded, and the harness complete gives ample protection to all parts. A very light harness, yet amply strong.



No. 30. Each, **\$3.00**

A. C. SPALDING & BROS.

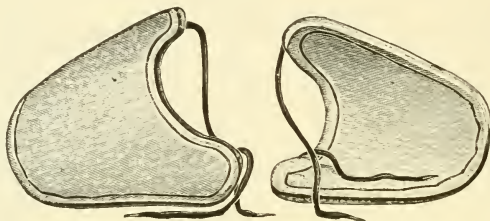
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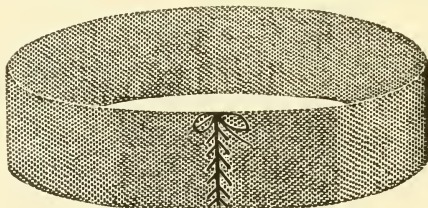
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SPALDING'S IMPROVED SHOULDER PADS



These pads are molded to form, are covered with heavy wool felt and have been highly endorsed by players and trainers who have examined them. Made in accordance with decisions of Rules Committee and after design of Coach Warner of the Carlisle Indians.

No. B. Each, \$2.50



Spalding's Elastic Foot Ball Belt

Our elastic belts stretch with the length of body and may be attached to jacket and pants, thus forming one continuous suit. By closely fitting the body the opposing player has less chance of tackling. They allow perfect freedom in all positions.

No. 1. Width 6 inches. Each, \$2.00

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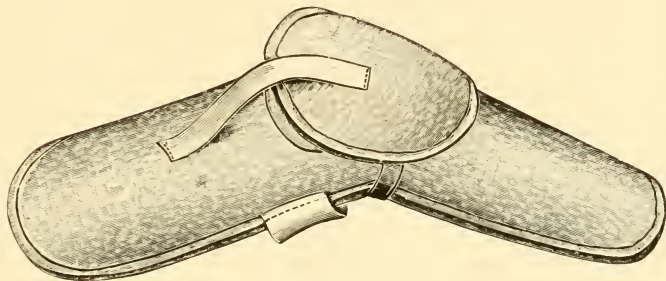
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The Spalding Combined Leg, Knee and Shin Guard



Made after model submitted to us by
Coach Warner of the Carlisle Indians
and calculated to give perfect protection
with absolute freedom of movements.
Heavily covered with wool felt and made
in exact accordance with decisions of
Rules Committee.

No. C. Combined Leg, Knee and Shin Guard. Each, \$5.00

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The Spalding Foot Ball Shoe

Finest kangaroo leather, with circular reinforce on sides. New style cleats on heel and sole, and hand-made throughout. Our highest quality shoe. Every pair warranted.

No. A2-0. Per pair, \$7.50

Sprinting Shoe, extremely light, otherwise same as our No. A2-o.

No. A2-0S. Per pair, \$7.50



The Amateur Special Shoe

Black leather, machine sewed, new style cleats.

No. A3. Per pair, \$3.50



The 'Varsity Shoe

Finest Black Calfskin. New style cleats on sole and heel, high cut and hand-made throughout. Equipped with Spalding's Foot Ball Ankle Brace.

No. A2-M. Per pair, \$5.50



The Club Special Shoe

Black Leather, machine sewed, with new style cleats on heel and sole.

No. A2. Per pair, \$4.50

Sprinting Shoe, extremely light, otherwise same as our No. A2.

No. A2-S. Per pair, \$4.50

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ON all of our foot ball shoes we are now putting the new style cleats, as shown in cut. After a thorough test last season by a few of the leading players, they unanimously declare them the best cleats ever put on a shoe. All our orders so far this season from college teams insist on our new style cleats for the shoes.

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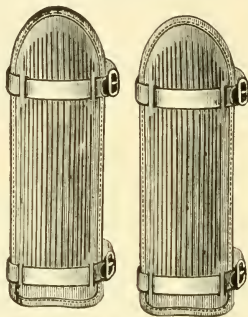
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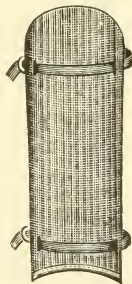
SPALDING'S Sole Leather Shin Guards

Made of heavy sole leather corrugated and molded to shape but flexible so that they will conform to any size leg. The new method of attaching the light but strong straps permits the guards to be bound lightly to leg and prevents them from getting loose or shifting. A very light guard, but gives absolute protection to the shins.



No. 30. Sole leather. Per pair, \$1.50

SPALDING'S Foot Ball Shin Guards



No. 8. Canvas, length 9 inches.
Per pair, 40c.

No. 9. Canvas, length 12 inches.
Per pair, 50c.

No. 10. Canvas, length 12 inches.
Per pair, 90c.

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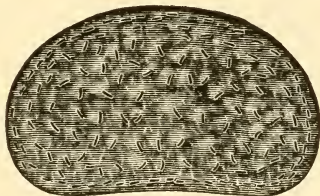
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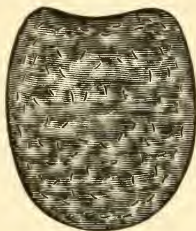
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SPALDING'S Leather Covered Pads



No. 2.



No 1.

These adjustable pads are hand made and considerably better than any we have furnished before. Can be readily attached to any part of a jersey, but are especially adapted to the shoulders and elbows. Covered with tan leather, lined with heavy drilling and filled with pure curled hair.

No. 1. Shoulder Pad. Each, 50c. Pair, \$1.00

No. 2. Elbow Pad. " 50c. " 1.00

Same as above, but covered with brown canvas and nicely padded.

No. 3. Shoulder Pad. Each, 25c. Pair, 50c.

No. 4. Elbow Pad. " 25c. " 50c.

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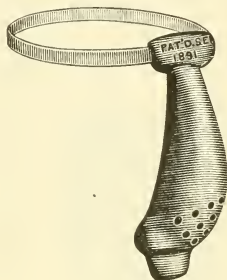
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Morrill's Nose Mask



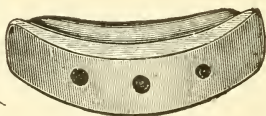
Morrill's Nose Mask is made of the finest rubber, and no wire or metal is used in its construction. It has become a necessity on every foot ball team, and affords absolute protection to the nose and teeth.

No. 1. Nose Mask, regulation size. Each, **\$1.50**

No. 1B. Nose Mask, youths' size. " **1.50**



Spalding's Rubber Mouthpiece



This mouthpiece is made of best quality Para rubber. Gives perfect protection to the mouth and teeth.

No. 2. Mouthpiece. Each, **25c.**

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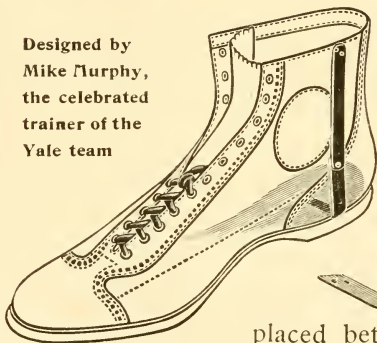
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Spalding's

Foot Ball Ankle Brace

Designed by
Mike Murphy,
the celebrated
trainer of the
Yale team



THE brace is made of two pieces of finely tempered steel, joined at the point shown by the white spot almost in the centre of cut. The brace is not visible, as it is

placed between the lining and the leather. It absolutely prevents turning of the ankle, and has been most thoroughly tested in actual play by the Yale team. It does not interfere with the free action of the ankle, and although adding nothing materially to the weight of the shoe, is strong enough to properly protect the ankle against serious injury.

Can be put in your shoes by any shoemaker.

No. 23. Ankle Brace . . . Per pair, 50c.

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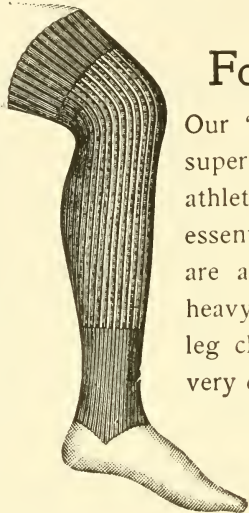
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Spalding's Foot Ball Stockings

Our "Highest Quality" Stockings are superior to anything ever offered for athletic wear, and combine all the essentials of a perfect stocking. They are all wool, have white feet, are heavy ribbed, full fashioned, hug the leg closely but comfortably, and are very durable. The weaving is of an exclusive and unusually handsome design.



No. 3-0. Plain colors, white feet. Pair, \$1.50

Colors : Black; Navy, Maroon. Other colors to order only.

Prices on application,

No. 3-0S. Striped, white feet, made to order only, any color. - - Per pair, \$1.75

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Spalding's Foot Ball Stockings

STRIPED RIBBED STOCKINGS

Best quality, all wool; stripes 2-inch, alternate. Colors: Scarlet and Black, Navy and Red, Orange and Black, Maroon and White, Royal Blue and White, Royal Blue and Black, Navy and White. Other colors to order only; prices on application.

No. 1RS. Heavy weight, \$1.35
 No. 2RS. Medium weight, 1.10
 No. 3RS. Good weight, .80

PLAIN COLORS

No. 1R. Heavy weight, all wool. . Per pair, \$1.00
 No. 2R. Medium weight, all wool. " .80
 No. 3R. Good weight, wool legs and cotton feet. Per pair, .60
 No. 4R. Cotton. " .25

Colors: Black, Navy, Maroon, Royal Blue and Scarlet.

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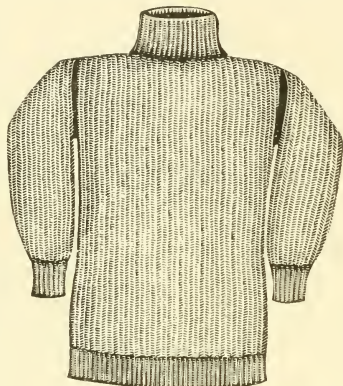
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Shaker Sweaters

We introduced these sweaters to fill a demand for as heavy a weight as our "Highest Quality" grade, but at a lower price, and after much experimenting we are in a position to offer this line in the following colors only: Black, Navy Blue, Maroon, Gray or White, as follows:

No. 1. Same weight as No. A. Each, \$5.00

No. 2. Same weight as No. B. " 4.00

No. 3. Same weight as No. C. " 3.00

Sizes, 30 to 44

Striped Sweaters

Same quality as No. 3. Sizes, 32 to 42, in following colors: Red and Black, Navy and Red, Orange and Black, Navy and White.

No. 3S. Each, \$3.50

Stripes 2 inches wide in above combinations of colors only.

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The Spalding Highest Quality Sweaters



Made of the very finest Australian lamb's wool, and exceedingly soft and pleasant to wear. They are full fashioned to body and arms and without seams of any kind. The various grades in our "Highest Quality" Sweaters are identical in quality and finish, the difference in price being due entirely to variations in weight.

We call special attention to the "Intercollegiate" grade which was originally made by special order for the Yale foot ball eleven and are now exclusively used by all Intercollegiate players. They are considerably heavier than the heaviest sweater ever knitted and cannot be furnished by any other maker, as we have exclusive control of this special weight.

- | | | |
|---------------|---|---------------|
| No. A. | "Intercollegiate," Special Weight. | \$6.00 |
| No. B. | Heavy Weight. | 5.00 |
| No. C. | Standard Weight. | 4.00 |

Colors: White, Navy Blue, Black, Gray, Maroon and Cardinal. Other colors to order at an advanced price.
Prices on application. All made with 10-inch collars; sizes, 28 to 44.

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Striped Sweaters

Same quality as our No. B. Sizes 32 to 42 inches. Colors: Red and Black, Navy and Red, Orange and Black, Navy and White. Stripes 2 inches wide.

No. BS. Each, \$5.50

Any other combination of colors to order only at an advanced price.



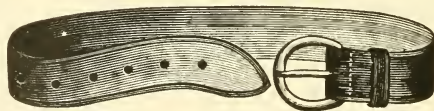
RIBBED

Ribbed Sweaters

Our No 9 Sweater is made of pure wool, full shaped to body and arms. It is guaranteed superior to any sweater of equal price. Guaranteed absolutely all wool. Sizes, 26 to 44. In following colors only: Maroon, Navy Blue, Black and Gray.

No. 9. Each, \$1.50

Foot Ball Belts



1½ in., heavy leather.
New style nicked harness buckle.

No. 728. Colors: Tan, Orange and Black. . . . Each, 50c.

No. 754. 1½ in., nickel harness buckle. Tan or Orange. " 25c.

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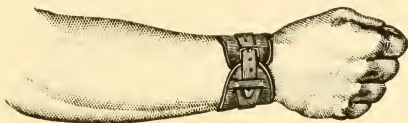
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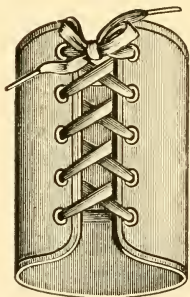
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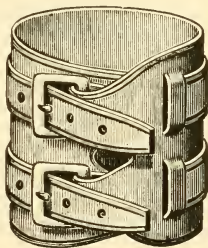
Leather Wrist Supporters



No. 100



No. 300



No. 200

Single strap and buckle, tan or black.

No. **100.** Each, **25c.**

Double strap and buckle, tan or black.

No. **200.** Each, **35c.**

Laced Supporter, tan or black.

No. **300.** Each, **25c.**

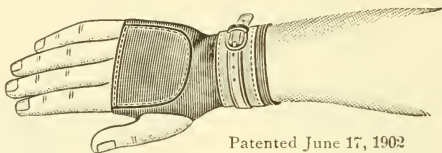
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Spalding's Combination Foot Ball Glove AND Wrist Supporter



Patented June 17, 1902

Designed by H. B. Conibear, Trainer, University of Chicago. The back of the hand is protected by a piece of sole leather and any strain to the wrist is avoided by leather strap supporter which forms the upper part of the glove. The glove does not interfere with the free use of the hand, and those in use last season were highly recommended by the players.

No. 1. Made for right or left hand. Each, \$1.00

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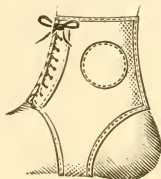
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The Hackey Patent Ankle Supporter

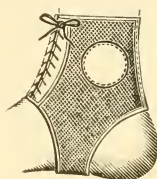
(Pat. May 12, 1897. A. G. Spalding & Bros., Sole Licensees)



No. H



No. SH



No. CH

An ankle support of some kind has now come to be recognized as a necessity by most athletes. The styles which we manufacture under the Hackey Patent have given universal satisfaction, and are absolutely reliable and practically perfect in construction and design. They are worn over or under stocking and support the ankle admirably, while not interfering in any way with free movements. Relieve pain immediately and cure a sprain in a remarkably short time.

In ordering, give size of shoe worn.

Made of soft tanned leather, best quality.

No. H. Per pair, \$1.00

Good quality sheepskin, lined, bound and reinforced.

No. SH. Per pair, 50c.

Black duck, lined and bound, leather reinforced.

No. CH. Per pair, 25c.

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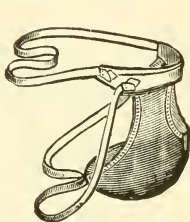
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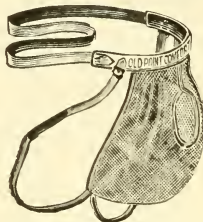
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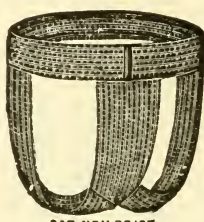
SUSPENSORIES



The "Spalding"



"Old Point Comfort"



247.NOV.22
Bike Jockey Strap



THE "SPALDING"

No. 70.	Non-elastic bands, knitted sack.	.	.	.	Each, \$.25
No. 71.	Elastic buttock bands, knitted sack.	.	.	.	" .35
No. 72.	Elastic bands, knitted sack.	.	.	.	" .50
No. 73½.	Elastic bands, silk sack.	.	.	.	" .75
No. 75.	Fine silk sack, satin top.	.	.	.	" 1.00
No. 76.	Silk bands, finest silk sack.	.	.	.	" 1.25



"OLD POINT COMFORT"

No. 2.	Lisle thread sack.	.	.	.	Each, \$1.00
No. 3.	Fine silk sack, satin trimmings.	.	.	.	" 1.25
No. 4.	Silk bands, satin trimmings, finest silk sack.	.	.	.	" 1.50



BIKE JOCKEY STRAP SUSPENSORY

For cyclists, athletes, base ball, foot ball, tennis players, etc. All elastic, no buckles. Clean, comfortable and porous. Three sizes: small, to fit waist 22 to 28 inches; medium, 30 to 38 inches; large, 40 to 48 inches.

No. 5.	Bike Jockey Strap Suspensory.	.	.	.	Each, 75c.
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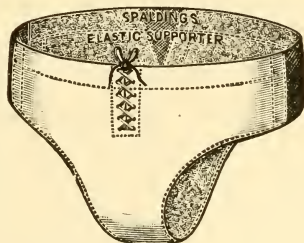
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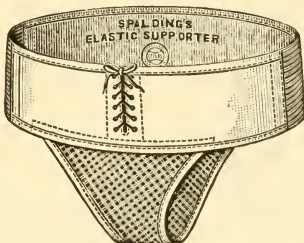
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Spalding's Supporters



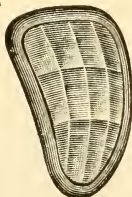
No. 2



No. 3

- No. 2. With elastic pieces on side. . . . Each, 50c.
 No. 3. Same as No. 2, but open mesh front. . . " 50c.
 No. 1. Made of best Canton flannel, one in box. " 25c.
 No. X. Same as No. 1, but cheaper in quality. . . " 15c.

Lower Abdomen Protector



Made of heavy wire, well padded and covered with chamois. To be used with either of the above supporters.

No. 4.

Lower Abdomen Protector.
Each, \$1.50

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Shoulder Cap Bandage

In ordering, give circumference
around arm and chest.

No. 1. Cotton thread. \$4.00

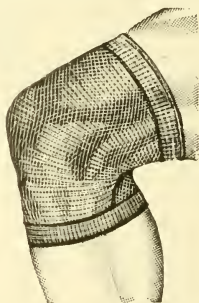
No. 1A. Silk thread. 5.50

Knee Cap Bandage

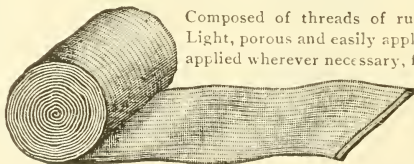
In ordering, give circumference below knee, at knee,
and just above knee, and state if light or strong
pressure is desired.

No. 4. Cotton thread. \$1.50

No. 4A. Silk thread. 2.00



Spalding's Elastic Bandage



Composed of threads of rubber completely covered.
Light, porous and easily applied. The pressure can be
applied wherever necessary, following all depressions or
swellings with folding
and unvarying uniform-
ity. Quickly secured by
inserting end under last
fold.

No. 25. Width $2\frac{1}{4}$ inches, 5 yards long (stretched), 75c.

No. 30. Width 3 inches, 5 yards long (stretched), \$1.00

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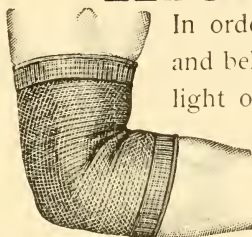
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ELBOW BANDAGE



In ordering, give circumference above and below elbow, and state whether for light or strong pressure.

No. 2. Cotton thread, \$1.50

No. 2A. Silk thread, 2.00

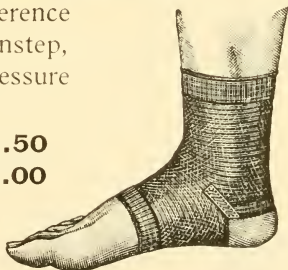


ANKLE BANDAGE

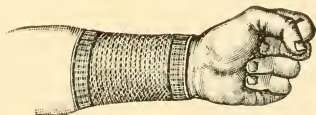
In ordering, give circumference around ankle and over instep, and state if light or strong pressure is desired.

No. 5. Cotton thread, \$1.50

No. 5A. Silk thread, 2.00



WRIST BANDAGE



Give circumference around smallest part of wrist, and state whether for light or strong pressure.

No. 6. Cotton thread. . . . Each, \$.75

No. 6A. Silk thread. . . . " 1.00

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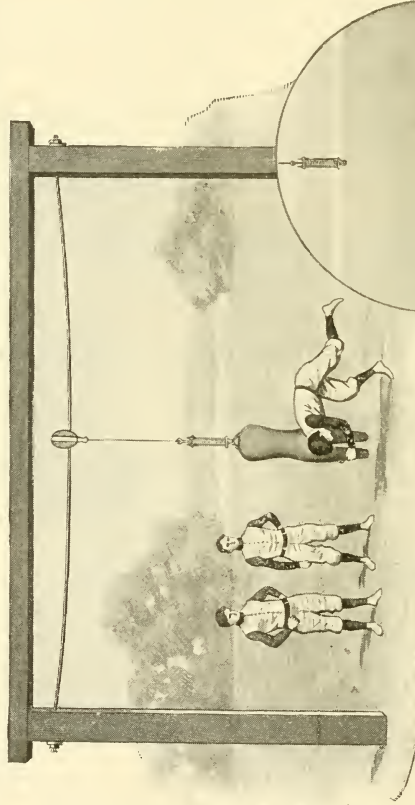
—Spalding's Foot Ball Tackling Machine and Releasing Attachment—

Tackling Machine

Including *Patented Releasing Attachment*, Dummy (made without joining at the waist, legs reinforced at the bottom with leather). Steel cross rod and everything necessary for setting up except uprights and cross beam.

\$40.00

Uprights and cross-beam can be purchased at any saw mill, however, and we will supply blue print showing exactly how the machine should be arranged.



PLAYER TACKLING DUMMY

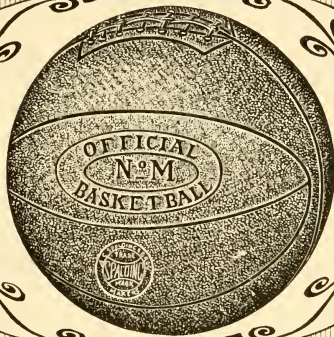
Spalding's Patented Releasing Attachment Separate—Complete with block and attachment spliced to rope ready to be attached to any tackling machine. **\$10.00**

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Extracts From Official Rule Book

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SEC. 3. The ball made by A. G. SPALDING & BROS. shall be the official ball. Official balls will be stamped as herewith, and will be in sealed boxes.

SEC. 4. The official ball must be used in all match games.

RULE III.—GOALS

SEC. 3. The goal made by A. G. SPALDING & BROS. shall be the official goal.



A. G. SPALDING & BROS.

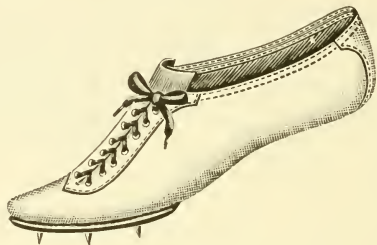
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We believe, in this shoe all the various difficulties experienced in manufacturing a satisfactory running shoe in the past have been overcome. First of all, you have here a shoe in which the spikes cannot by any possibility come in contact with the foot; then you have a rubber sole that is an assistance, in that it is partly underneath the spike, and therefore acts in the nature of a cushion. Above all, our patented principle in this shoe enables us to place the spikes so that they will not come loose after being wet, as water has no effect on the rubber sole. We also claim that on account of the non-slippable purchase a runner obtains with this sole, he is able to make a quicker start than is possible with a shoe of ordinary construction, and this fact has been demonstrated conclusively by those who have already tried our shoe and who pronounce it perfect in all respects.

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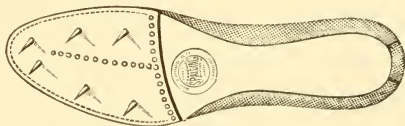
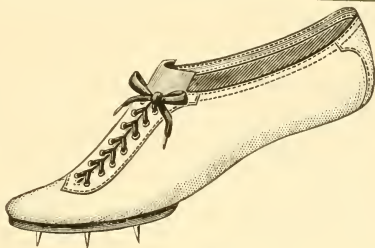
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Calfskin Running Shoe,
machine made; solid
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spikes firmly in place.

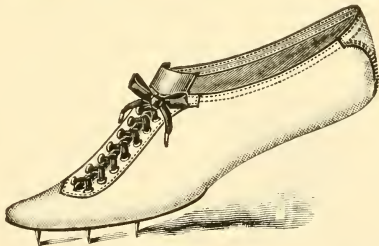
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Calfskin Running Shoe
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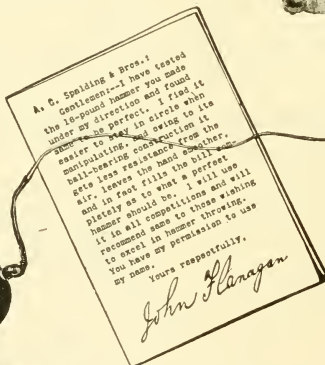
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No. 02. 12-lb., with Sole Leather Case. \$12.00
No. 06. 16-lb., with Sole Leather Case. 12.00

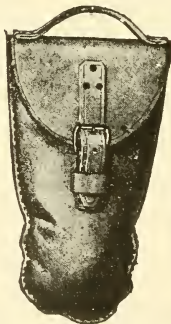
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Record of
171 ft. 9 in.,
Long
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September
3, 1901, was
made with
this
hammer



The Spalding Championship Ball Bearing Hammer, originally designed by John Flanagan, champion of the world, has been highly endorsed only after repeated trials in championship events. The benefits of

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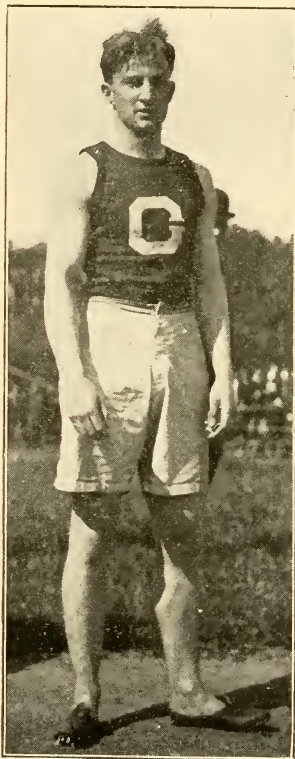


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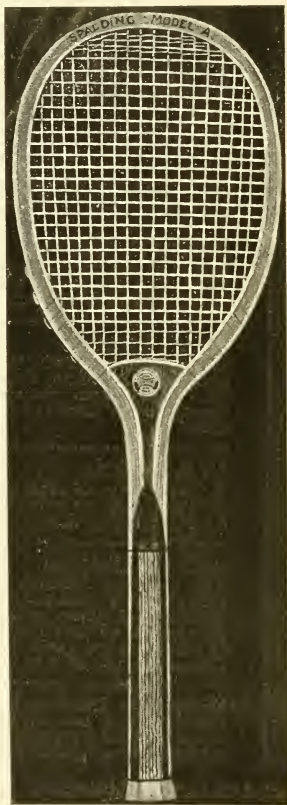
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Edited by T. H. Murnane



Specimen illustration from "How to Play Base Ball."

This book is undoubtedly the best work of its kind ever published. It contains instructions for playing every department of the game by such prominent players as Napoleon Lajoie, champion batsman of the National League in 1901; James Collins, of the Boston Americans; Hugh Jennings, of the Philadelphia League Club; Jack Doyle, Cy Young, M. J. Kittridge, Herman Long and Fred Clarke. It contains nearly fifty pages of pictures, showing how the leaders play their respective positions. The department of pitching is especially covered, being illustrated with pictures of many pitchers in action and specially posed photographs showing how to hold the ball for the various curves. No boy who aspires to be a good ball player can afford to be without this book. It will be sent anywhere on receipt of price—

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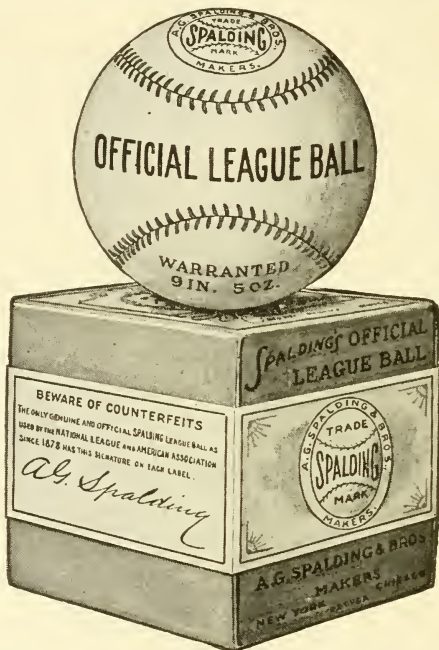
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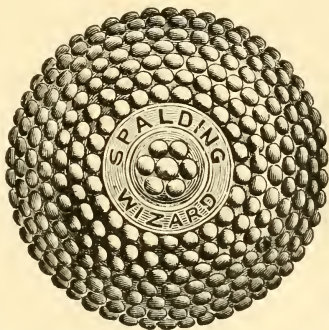
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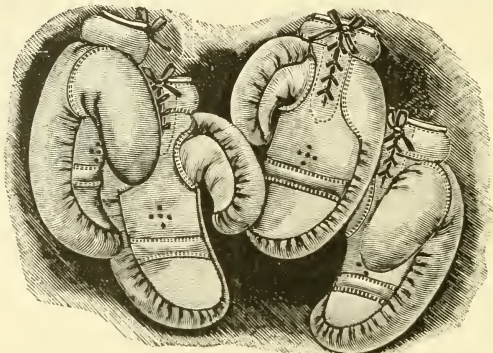
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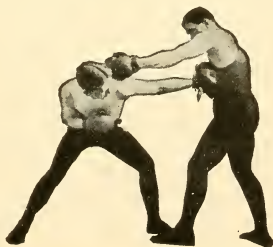
HOW TO BECOME A BOXER

For many years publications have been issued on the art of boxing that to a certain extent did not enable the novice nor the youth to become proficient in the manly art. There is probably no man in America better qualified to teach boxing than Prof. William Elmer, and in his book on the subject he goes into it very exhaustively. The book contains about seventy full page illustrations, showing how each blow is to be made, how to attack and how to defend yourself. It shows how the hands must be held and the positions to take, with descriptions that are so accurate that any boy can take them, open them up and with a young friend become proficient. Besides being a fully illustrated book on the art of self-defence, it contains nearly all the photographs of the leading American boxers and the positions they take, which in itself is instructive; the different rules under which all contests are held, and articles which will interest anyone on the question of physical education. In order to make this publication the most accurate one issued, Prof. Elmer had his sparring partner posed personally for all the illustrations.

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GENTLEMEN—I wish to thank you for the perfect shoes and boxing gloves that you furnished me for my fight with Mr. Fitzsimmons, and also to give you my endorsement for the superb quality of these goods. I shall expect to use them in all my future contests.

Yours very truly,

Jack Johnson

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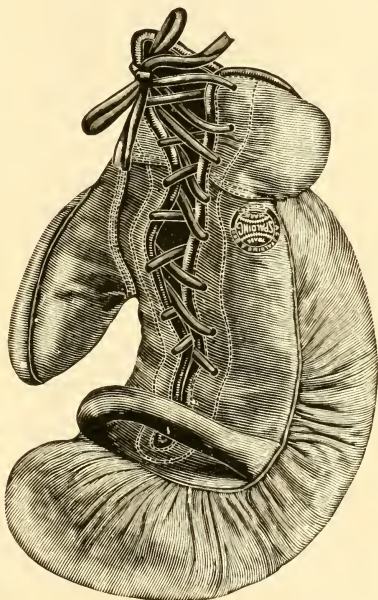
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Cut illustrates the patent palm lacing and patent palm grip referred to in descriptions of following boxing gloves. With these improvements we believe our line is absolutely the finest on the market. The patent palm lacing insuring a snug fit at all times is a very valuable feature, and the patent palm grip, we know, will be appreciated by those who want gloves that are up-to-date in every particular.

No. 11. Corbett Pattern, large 7 oz. glove, gambia tan leather, padded with best curled hair, patent palm lacing, padded wristband, patent palm grip. Substantially made throughout for hard usage. Per set, \$4.50

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No. 13. Corbett pattern, olive tanned leather, well padded with hair, patent palm lacing and patent palm grip, leather lined and bound, Per set, \$4.00

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I gave the glove a thorough trial and am confident you have hit the nail on the head, and have no hesitancy in recommending the article in question to those who are interested.

Yours very truly,

*Young Corbett*²
Featherweight Champion of the World.



*Copyright, 1901, by J. Hall,
1456 Broadway, New York.*

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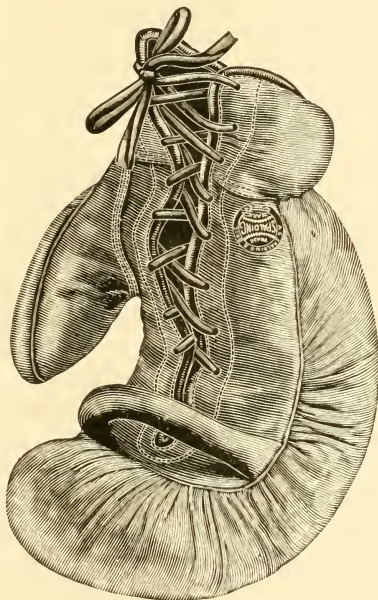
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No. 17. Corbett Pattern, craven t an leather, well padded with hair, patent palm lacing, patent palm grip and padded wrist-band. Per set, \$3.00

No. 19. Corbett Pattern, cravent t an leather, well padded with hair, patent palm grip and patent palm lacing. Per set, \$2.50

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No. 20. Made of finest selected calfskin; double stitched, welted seams and reinforced throughout. Very fast, and will give excellent satisfaction. An ideal bag for gymnasium use.

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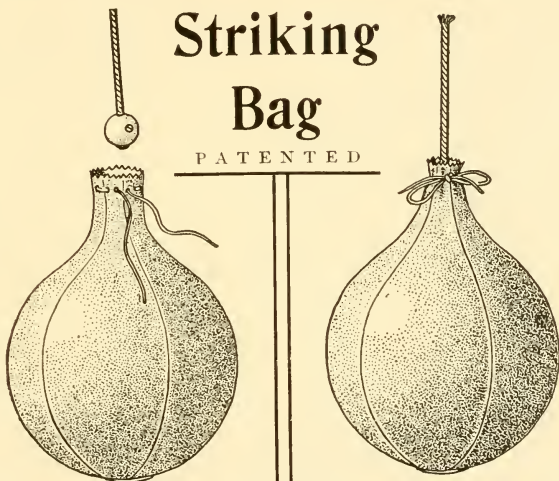
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New
Inflated
Striking Bag
Disks**



The above cut illustrates our Inflated Door Braced Striking Bag Disk. As will be noted, the disk is bracketed out from a doorway bar, having a single overhead brace, which is screwed to the wall above the door. The doorway bar is made of iron pipe, having rubber cushions on ends. Turning the pipe causes the end sockets to spread, jamming the cushions against the sides of door and making the bar firm and rigid. The bar may also be used as a "chinning" horizontal bar. In ordering, state width of doorway.

No. B.R. Without bag, \$10 00

The above cut illustrates our Wall Braced Inflated Striking Bag Disk.

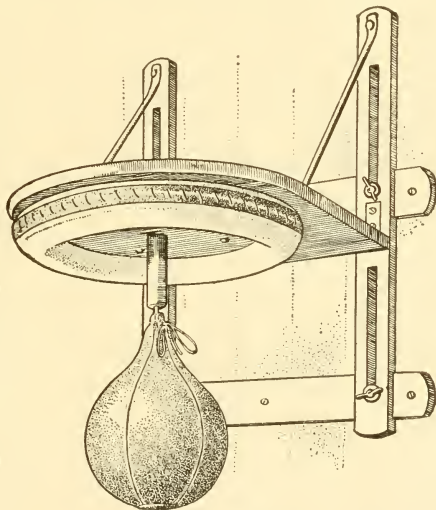
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These disks overcome to a large degree the two principal faults of the regular type, viz., noise and vibration. The bag hitting against the pneumatic cushion makes no more noise than the fist



PATENT PENDING

The above cut illustrates our inflated Adjustable Wall Striking Bag Disk. The simplicity of the adjusting feature will commend itself at once. By merely loosening the jamb thumb-nuts the disk is easily raised and lowered and is held perfectly firm and solid when the thumb-nuts are tightened.

hitting the bag, and the vibration is reduced to the minimum. The action is made much faster, and better permits the fancy "rolls," "taps," etc. We make these disks up in several forms for varying conditions, all of them substantial and durable, and the bladder is absolutely guaranteed for six months' time. A striking bag will last just about half again as long with an inflated disk as with the solid, to say nothing of the increased pleasure afforded in punching.

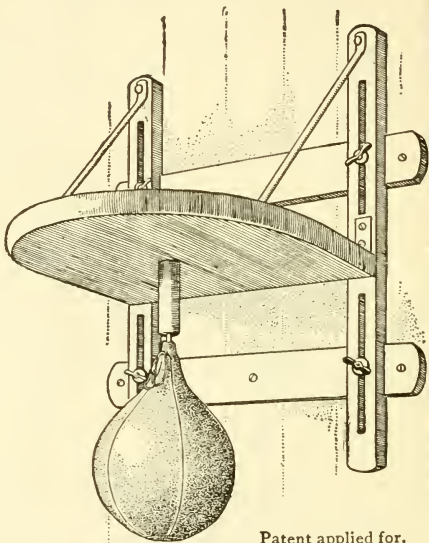
No. A-R. Complete, without bag, \$10.00

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SPALDING'S NEW SOLID STRIKING BAG DISKS

These disks are designed to fill the want for a low priced article of durable, substantial construction. While they lack some of the distinctive virtues of our inflated disk in point of design, quality and workmanship, they are much superior to any other kind at equal cost, and being so compact, are considerably less noisy than the large gymnasium disk. It is *strongly braced*, and perfectly solid, affording the best possible striking surface for the bag obtainable from a wooden platform, and what is of more importance, it will *stay solid*.



Patent applied for.

The above cut illustrates our Adjustable Solid Striking Bag Disk. This is in every way similar to No. AR, excepting the inflated feature.

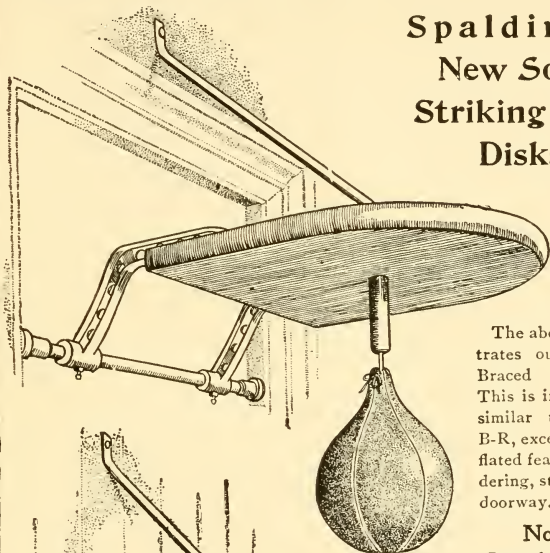
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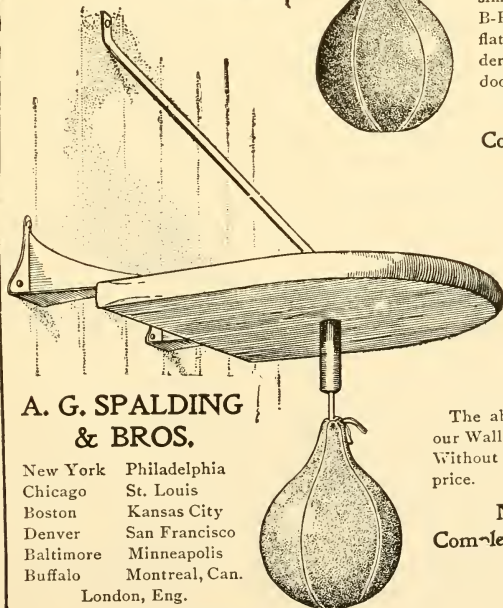
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Spalding's New Solid Striking Bag Disks



The above cut illustrates our Doorway Braced Solid Disk. This is in every way similar to our No. B-R, excepting the inflated feature. In ordering, state width of doorway.

No. D-R.
Complete, without bag, \$7.50



The above cut illustrates our Wall Braced Solid Disk. Without an equal at the price.

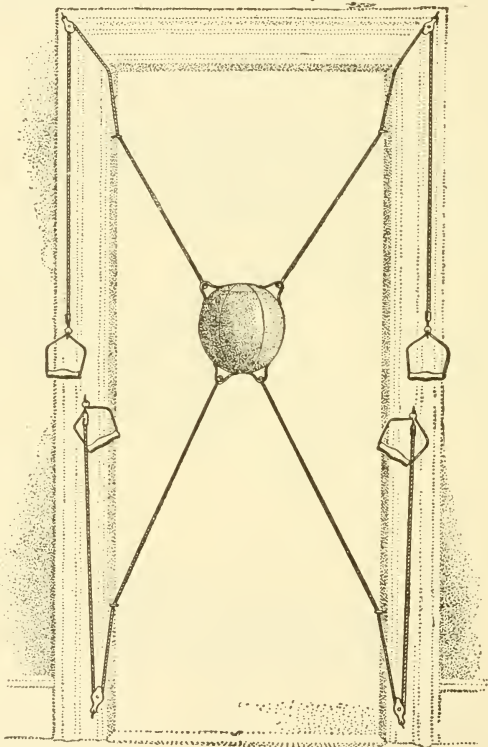
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Complete with extra quality striking bag, durable elastic cord, noiseless pulleys and striking bag gloves. \$6.00

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